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STATUS  
of  
AIR POLLUTION CONTROL  
in  
MONTANA

A  
Report by  
The Division of Air Pollution Control, Industrial Hygiene & Radiation  
MONTANA STATE DEPARTMENT OF HEALTH  
HELENA, MONTANA  
December 31, 1970

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**CURRENT STATUS OF AIR POLLUTION**

**CONTROL IN**

**MONTANA**

**REPORT BY**

**THE MONTANA STATE DEPARTMENT OF HEALTH  
DIVISION OF AIR POLLUTION CONTROL, INDUSTRIAL  
HYGIENE AND RADIOLOGICAL HEALTH**

**December 31, 1970**

**With major contributions from the Missoula  
City-County Health Department, Missoula  
City-County Air Pollution Control Board, Billings  
Cascade County Health Department, Great Falls**



## C O N T E N T S

- I. SUMMARY
- II. ABATEMENT PLAN
- III. VARIANCES
- IV. MAJOR PROBLEM AREAS
- V. SPECIAL PROBLEMS
- VI. SPECIAL STUDIES
- VII. REGULATIONS
- VIII. BUDGET
- IX. FEDERAL LAWS

## APPENDIXES

- A. AIR QUALITY IN MONTANA
- B. STATUS OF STATE GOVERNMENT  
FACILITIES AND INSTITUTIONS
- C. STATUS OF FEDERAL GOVERNMENT  
FACILITIES AND INSTITUTIONS
- D. STATUS OF AIR POLLUTION  
SOURCES IN MONTANA BY COUNTY

## ACKNOWLEDGEMENTS

Grateful appreciation is expressed for the assistance of the many Federal, State, and County officers who contributed to this report.

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## AIR POLLUTION CONTROL IN MONTANA

### I. SUMMARY

This report presents information on the efforts of the Montana State Department of Health, other State agencies and federal agencies in Montana to abate and control air pollution in Montana. It is based on data submitted to the department by the various departments and agencies in compliance with requests made by the Division of Air Pollution Control.

These data, submitted by the various departments and agencies and that collected by our staff for industries and other pollution sources and communities throughout the State indicate, in the year ending December 31, 1970 there were 401 remedial actions taken at 362 installations throughout the State. These actions were in addition to abatement projects undertaken in previous years.

There are eleven facilities operating under variance, but this does not mean that all other facilities or pollution sources in Montana have completed their work on abatement and control of air pollution.

### II. ABATEMENT PLAN

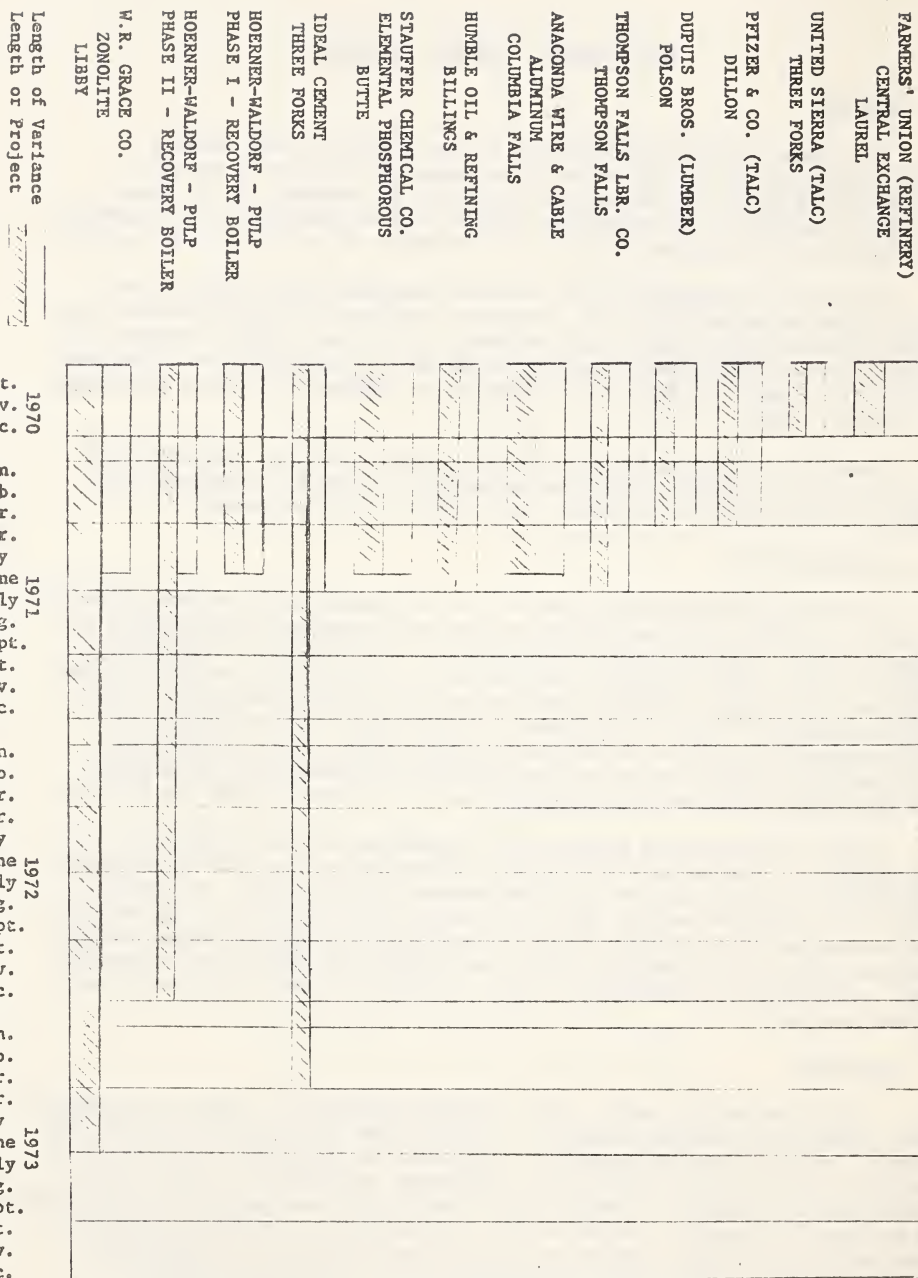
With the passage of the Clean Air Act of Montana which became effective on July 1, 1967, a six year abatement plan was developed which should, by June 30, 1973, find all major and significant air pollution sources in Montana under control except slash burning. Slash burning on forest lands presents the largest technical problem not yet entirely resolved. While the curtailment, if not the complete elimination, of slash burning is currently only a goal to be achieved by June, 1973, it is expected that the regulations which now make slash burning acceptable will be revised so that such burning will be in violation of the open burning regulations.

Annual revisions are made to the regulations or more frequently, if necessary, as information is developed on the control procedures available, the severity of the problem, and the demands of the people. On June 30, 1973 it is expected that at least 75% control will have been achieved with the remaining 25% not under positive control due to circumvention, lack of adequate local participation, pollution originating outside the state and that contributed by automobiles, dust from plowed fields, wild fires and slash burning.

### III. VARIANCES

During the period July 1, 1967 through December 31, 1970, 13 variances were granted for varying lengths of time to major pollution sources in the State. Two variances were denied. The names of the industries requesting variances and the time requested is indicated in Figure 1. Each of the variances were granted or denied only after public hearing before the Montana State Board of Health. Variances may be granted for a maximum length of one year, but the total amount of time for construction or completion of certain projects will extend beyond those dates. Progress reports are required and have been received from all those receiving variances.

FIGURE 1  
VARIANCES





#### IV. MAJOR PROBLEM AREAS

The following areas require substantial improvement in air quality:

1. Columbia Falls
2. The Flathead Valley
3. The Missoula Area
4. The Billings Area
5. The Anaconda Area
6. The Helena Valley

#### V. SPECIAL PROBLEMS

##### A. Emissions:

1. Slash burning and land clearing on federal, State and other forest lands including private slash burning
2. Burning dumps
3. Railroad right-of-way burning
4. Sulfur oxides and particulate emissions from smelters
5. Sulfur oxides, other reactive sulfur and particulate from refineries
6. Fluorides and particulate from the aluminum plant
7. Dusty streets and roads
8. Particulate emissions from coal-burning boilers

##### B. Administration:

1. Recruitment of qualified personnel in air pollution control is difficult. Qualified people in this work are scarce and are being retained by other at higher salaries than we are able to offer.
2. Administrative practices in the state government and in the Department of Health have made it difficult to be flexible enough to hire people who are interested in the job even though the money was available to meet their demands. By the time the administrative roadblocks had been overcome, the candidates were no longer available.
3. Enforcement procedures outlined in the Clean Air Act are cumbersome. A rapid development of enforcement procedures against those who have infringed upon a regulation or who have been determined to be in violation is cumbersome and may be the weakest link in the control chain.

4. Office space for the department is extremely limited and makes an efficient operation difficult.
5. Although some excellent effort has been made by some cities and counties, local participation by county commissioners and municipal authorities is generally weak. Only Yellowstone and Missoula counties have established air pollution control programs as specified in the Clean Air Act. Great Falls and Cascade County have a functioning air pollution control effort although not yet a legal air pollution control program under the statute. Contributions to the air pollution control program are being made by control officers designated for Lewis and Clark, Cascade, Gallatin, Glacier, Pondera, Powder River, Teton, Toole, Custer and Fallon Counties. No positive announcement of intent to participate in air pollution control has been received from Lake, Flathead, Granite, Deer Lodge, Powell or Silver Bow Counties.
6. Community dumps and the air pollution therefrom is under the supervision of another division creating confusion in enforcement and program development.
7. Supervision and management of the solid waste program is in another division creating confusion in enforcement and program development for air pollution control.
8. Animal feed lots and the air pollution therefrom (odors) are under the supervision of another division creating some confusion in enforcement and program development.

## VI. SPECIAL STUDIES

Special Studies have been conducted with the assistance of the National Air Pollution Control Administration in the Helena-East Helena Area and in the Columbia Falls-Glacier Park Area. The Helena-East Helena Study has been completed and shows significant requirements necessary for the control of heavy metals and sulfur oxides. Continuing studies will be made on the absorption of heavy metals by children and others in the East Helena-Helena Area. Lead, cadmium and arsenic in fourth grade boys in East Helena is higher than Helena which is higher than in Bozeman. Bozeman was the control city.

At Columbia Falls fluorides have been demonstrated to be excessive in many areas. A regulation becoming effective in June, 1973 requires that not more than 864 pounds of fluorides shall be emitted per day from the Anaconda Aluminum Plant.

## VII. REGULATIONS

90-001 Air Pollution Control Construction and Operating Permits  
Effective date--June 30, 1970

90-002 Limitations of the Levels, Concentrations or Quantities of Emissions of Various Pollutants from Sources Necessary to Prevent, Abate or Control Air Pollution No effective date.  
Definition of terms.

- 90-003 Incinerators Effective Date--June 30, 1970
- 90-004 Restriction of Emission of Particulate Matter from Industrial Processes Effective Date--June 1, 1970 for existing equipment and November 23, 1968 for new equipment.
- 90-005 Preventing Particulate Matter from Becoming Air-Borne Effective Date--November 23, 1968
- 90-006 Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Effective Date--June 1, 1970 for existing equipment and November 23, 1968 for new equipment.
- 90-007 Restriction of Emission of Visible Air Contaminants Effective Date--November 23, 1968
- 90-008 Restriction of Sulfur Oxide Emissions Section I  
Effective Date--April 30, 1970
- Section II Regulation of Sulfur in Fuel Effective Date--July 1, 1970
- Section III Primary Non-Ferrous Smelters Effective Date--June 30, 1973 for existing operations and June 30, 1970 for new operations.
- Section IV Kraft Pulp Mills Effective Date--November 30, 1972 for existing mills and June 30, 1970 for new mills
- 90-009 Control of Odors in the Ambient Air Effective Date--March 1, 1969
- 90-010 Open Burning Restrictions Effective Date--November 23, 1968
- 90-011 Malfunction of an Installation Effective Date--November 23, 1968
- 90-012 Circumvention Effective Date--November 23, 1968
- 90-013 Control of Air Pollution in Motor Vehicles Effective Date--November 23, 1968
- 90-014 Prevention, Abatement, and Control of Air Pollution From Wood Waste Burners Effective Date--November 23, 1968
- 90-016 Requiring Testing or Testing Facilities Effective Date--June 30, 1970
- 90-017 Restricting the Emission of Fluorides Effective Date--June 30, 1970 for new equipment and June 30, 1971 for existing equipment
- 90-018 Storage of Petroleum Effective Date--June 30, 1970 for new operations and June 30, 1972 for existing operations

90-019 Maximum Allowable Emission of Fluorides from Primary Aluminum Reduction Plants, Aluminum Smelters or Aluminum Manufacturing Plants Effective Date--June 30, 1970 for new plants and June 30, 1973 for existing plants.

#### VIII. BUDGET

A formal budget for air pollution control activities started in July of 1965 when a federal grant for \$10,000 was received. Since some air pollution work had been performed previous to that time, beginning in 1961 and 1962 with a small grant from the U.S. Public Health Service, the total non-federal funds had increased to \$19,000 by 1965. The formula for the federal support is a stimulatory-type formula which states that the previous year's non-federal expenditures become a base which are non-matchable and that if any federal funds are to be obtained they must be obtained from monies appropriated in addition to the previous year's base. The development program extends for two years at which time the total non-federal appropriations become the base or non-matchable portion for the following year's expenses. Therefore, each year the total budget must be increased in order to qualify for federal support. At no time can non-federal funds for any year be less than the previous year.

#### IX. FEDERAL LAWS

In addition to the impact that federal money-support has upon the development and activities of the air pollution control program, recently enacted federal legislation is designed to stimulate additional activities in the State. The latest activity is the designation of whole states as control regions requiring, on a systematic timetable, the development of ambient air quality standards, emissions standards and implementation plans. The only single area designated thus far and published in the Federal Register is the Billings-Yellowstone County Area comprising the counties of Yellowstone, Stillwater and Carbon. For this region and for the five additional regions which will be developed for the State, public hearings must be held for the identification of ambient air quality standards for all of those materials for which criteria has been published by the federal government.



## APPENDIX A

## A SURVEY OF EXISTING AIR QUALITY IN MONTANA

During the past ten years community air quality studies have been done in the larger population centers in twelve Montana counties. These studies were limited to areas with suspected or potential air pollution problems. The objective of these studies was to define the existing air quality, in terms of measurements made, which would serve as a baseline to help guide future air pollution control efforts in Montana. Following is a short summary of the results of these studies listed by county.

Gallatin County

The major community, Bozeman, does not have a serious air pollution problem at this time due primarily to the lack of significant industrial sources. The surrounding mountainous terrain and the frequency of temperature inversions, however, render it susceptible to a severe decline in air quality if strict control of new sources is not employed.

West Yellowstone has a significant suspended particulate and dustfall problem which is directly attributable to the general "dirtiness" of the community and the nearby wood products industry.

Broadwater County

The county seat and center of population, Townsend, has poor air quality primarily due to large amounts of particulate from dusty paved and unpaved streets plus large quantities of finely divided particles blowing from exposed areas of the Canyon Ferry Lake bed. Poor combustion practices and open burning of trash also contribute to the excessive particulate loading of the air.

Silver Bow County

Butte, the counties largest city, shows excessive total particulates plus elevated arsenic, lead and fluoride concentrations. Although, levels of arsenic, lead and fluorides are usually below the present State Standards\*, the frequency of inversions and the mountainous terrain suggest future air pollution problems. More study of this area is needed to determine the extent of any decline in its air quality.

Cascade County

Cascade County is the site of one of the largest cities in Montana, Great Falls. This city has better air quality than most cities studied. Values found for suspended particulate were essentially at the State Standard\* for the year studied (1961). Lead values were above those found in many Montana cities but were still well below the State Standards. Great Falls enjoys good ventilation and does not have the extreme pollution potential evident in other areas studied.

### Lewis and Clark County

The air of the Helena-East Helena area, of Lewis and Clark County, has been found to exceed nearly every existing State Standard\*. Particulates, dustfall, sulfates and sulfur dioxide are all in excess of the Standards\* on a regular basis. Lead and fluoride levels are above the State Standard\* periodically. There are also elevated levels of cadmium, zinc, and arsenic in the area. Principal sources are three non-ferrous metal industries located in East Helena. Inversion conditions are frequent and further deterioration of the area's air quality is certain if a comprehensive air resource management plan is not carried to the point of employing the best technology available.

### Deer Lodge County

Anaconda, the largest city in this county, again shows many air contaminants in excess of the State Standards\*. These are: suspended particulate, fluoride, sulfate, sulfur dioxide and dustfall. Arsenic and lead values are also elevated. Anaconda has the distinction of the highest rate of death due to lung cancer in the State. This rate is more than twice the national average. Again a large portion of the air contaminants present are emitted by nearby non-ferrous metal industry.

### Powell County

Deer Lodge, the major community, is in close proximity to Anaconda and for this reason, shares its poor air quality. Suspended particulate is essentially at the State Standard. Arsenic, sulfur dioxide and lead are five times or more lower than in Anaconda. Fluoride, however, is elevated and at times during the year, exceeds the State Standards. Fluoride levels in and around the community of Garrison exceed the State Standards for fluoride in the air and fluoride in forage. Current levels are far below values determined in past years.

### Missoula County

Missoula County has some of the poorest air quality, with respect to particulate loading, in Montana. A large portion of its population is located in the mountain valley community of Missoula. Many forest products industries are located in the community and the occurrence of inversions are frequent. Hydrogen sulfide, suspended sulfate, and mercaptan levels are also elevated due to a nearby pulp mill. Particulate measurements have on occasions been more than three times the existing State Standard. A considerable reduction in wood waste burning has been achieved resulting in improved air quality. Open burning has been eliminated to a large degree.

### Lincoln County

A large portion of the county's population is located in the Libby Valley. The suspended particulate loading of the air in this area are extremely high and have shown an increase of nearly 70% over the past ten years. Dustfall and suspended sulfates are also high. Inversion conditions are frequent and

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\*State Standards - throughout this air quality survey refers to the Montana State Ambient Air Quality Standards.

wind speeds are extremely low. There is an imminent danger of further degradation of this valley's air quality in the future if stringent control measures are not employed at all sources.

#### Flathead County

Flathead County has, overall, poor air quality with severe air pollution existing in the Columbia Falls area. Fluoride levels are routinely above the State standards. Dustfall and suspended particulate matter are usually above the State standards. Temperature inversions occur almost nightly and wind speeds are low. These meteorological factors, mountainous terrain and many sources of air pollution render the Flathead Valley susceptible to severe air pollution episodes.

#### Lake County

Polson, the county seat of Lake County, is the largest community in the county. The air quality in this area is marginal. Because of the stable atmospheric conditions, however, it is susceptible to severe air pollution problems.

#### Yellowstone County

Yellowstone County is the only eastern Montana county studied so far. It is the most populous county in Montana with the Billings-Laurel area being its largest population center. Billings and Laurel are located in a shallow plains valley which is subject to temperature inversions about 40 to 50 percent of the time. Suspended particulate and dustfall are generally at or in excess of the State standards. Sulfur dioxide and suspended sulfate are generally over the State standards. Hydrogen sulfide is also suspected to be high but its concentration has not been determined by sampling. The rapid growth of the area in population and industry suggests high potential for severe air pollution problems in the future.

#### Other Counties in Montana

No routine atmospheric sampling has been done in the other 34 counties of Montana. In general, their low population densities, lack of significant sources and good ventilation characteristics preclude problems of the serious nature found in the twelve counties studied. A comprehensive program of air pollution control, however, is essential in these counties to preserve the present quality where it is better than the standards. It is expected that dustfall and suspended particulate will be excessive in many of the communities not yet studied.

APPENDIX B  
AIR POLLUTION CONTROL STATUS OF  
STATE GOVERNMENT FACILITIES AND INSTITUTIONS

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Aeronautics Commission All Facilities (Helena)		Incinerators to be dismantled by December, 1970. All refuse to city landfill.
West Yellowstone Airport Terminal (West Yellowstone)		Incinerators discontinued as of October, 1970. All refuse to city landfill.
Dillon Community Airport (Dillon)	X	Open burning permitted. Plans underway to have county pick up refuse.
Department of Institutions Boulder River School (Boulder)		No incinerator. In conjunction with town of Boulder, have dug a "modified" landfill for combined use. Full compliance not expected until after July 1, 1971. Open burning of hospital waste.
	X	
Center for the Aged (Lewistown)	X	Burn tree trimmings. Will terminate burning when directed.
Children's Center (Twin Bridges)		Stopped open burning. Terminated use of unapproved incinerator 7-1-70.
Eastern Montana Training Center (Glendive)		Open burning stopped. No incinerator.
Galen State Hospital (Galen)	X	Operate unapproved incinerator for pathological wastes. Practice open burning of paper. Improver landfill of garbage.
Mountain View School (Helena)		Terminated use of unapproved incinerator on 7-1-70. Initiated garbage collection with garbage service, July, 1970. No open burning.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Pine Hill School (Miles City)		No incinerator, open burning discontinued June, 1970.
Veteran's Home (Columbia Falls)		No incinerator. No open burning permitted. Plan to put in approved landfill by April, 1971.
Swan River Youth Forest Camp (Swan Valley)		No incinerator. Open burning of tree prunings. No controls planned.
Montana State Prison (Deer Lodge)	X	Operate two unapproved incinerators. Practice open burning. Working on agreement with Deer Lodge City to construct approved sanitary landfill. Agreement pending on approval of State to lease ten acres of land to city at that site. Will discontinue burning at that time. Could be ready by 7-1-71.
Warm Springs State Hospital (Warm Springs)	X	Operate unapproved pathological incinerator. Open burning dump operated. Dump burning to be eliminated upon acquisition of prison's crawler-tractor on Jan.1, 1971.
Department of Health (Helena)		Outdoor incinerator dismantled 1970. Virus lab. incinerator repaired, improved afterburner, 1970. No open burning.
Water Resources Board (Helena)		No incinerators. Open burning stopped.
University of Montana (Missoula)		Two incinerators of approved type. No open burning is permitted. Operate two small coal fired residential furnaces.
Adjutant General (Helena)		No incinerators. Refuse disposed of by city or county at all facilities except at Fort Harrison where a landfill replaced a burning dump in 1967. No coal burning furnaces (all natural gas). No open burning permitted.
Department of Admin- istration (Helena)		Discontinued all burning in the Capitol complex except approved virus lab. incinerator operated by health department.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Department of Fish and Game (Helena)		Incinerators and/or burning barrels have been gradually phased out in the most major recreation areas and district headquarters and none will be in operation in the summer of 1971. Open burning at hatcheries stopped. Other open burning may be done with valid permit only.
Superintendent of Public Instruction (Helena)		No incinerators and no open burning at Helena offices.
Eastern Montana College (Billings)		Incinerators discontinued in 1968. No unapproved open burning permitted. Future science complex will have afterburner facilities and scrubbers.
Montana State University (Bozeman)		One incinerator of approved type. No open burning permitted as of June 1, 1970. No coal furnaces in use. Will convert pottery kiln to natural gas.
Liquor Control Board (Helena)		No incinerators; no open burning permitted. All waste material hauled to city landfill.
Highway Commission (Helena)		27 of 28 asphalt plant contractors used wet scrubbers in 1970. Only 1 did not use any control. No open burning on right-of-way maintenance is done. Open burning on new construction has been curtailed by working the material into suitable fill or burying. Wet scrubbers have been installed on all three asphalt plants owned and operated by the Maintenance Division. A wood chipping machine has been purchased to eliminate need to burn brush in connection with maintenance program.
Western Montana College (Dillon)		Discontinued use of unapproved incinerator in 1969. Converted to natural gas from oil. No open burning permitted.
Montana College of Mineral Science and Technology (Butte)		No incinerator used. No open burning done.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
State Forester (Helena)		Slash burning on approximately 20,000 acres annually on State and private lands. Attempting to avoid slash burning if it can be determined that fire hazard is minimal. Recently purchased slash chipper; may provide alternative disposal method to burning. Cost and feasibility studies are now underway.

## APPENDIX C

## AIR POLLUTION CONTROL STATUS OF

## FEDERAL GOVERNMENT FACILITIES AND INSTITUTIONS

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Vereran's Administration Hospital (Miles City)	X	Incinerator replacement budgeted for this fiscal year with accomplishment anticipated during early summer, 1971. Upon recommendation of office in Washington, D.C. plans delayed awaiting new guide specifications. No open burning permitted. Refuse disposed of by contract.
V.A. Center (Fort Harrison)	X	Open burning of weeds at waste water stabilization facility. Have applied for funds to acquire equipment necessary to make use of sanitary landfill. Operate approved type pathological incinerator, multiple-chambered, primary and secondary oil burner, wet scrubber.
General Services Administration  (Missoula)		No incinerators used. No open burning.
(Helena)		No incinerators used. No open burning.
(Kalispell)		No incinerators used. No open burning.
(Bozeman)		No incinerators used. No open burning.
(Butte)		No incinerators used. No open burning.
(Livingston)		No incinerators used. No open burning.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
General Services Admin. (Great Falls)	X	No improvements in unapproved incinerator now in use. No open burning permitted. Making plans when space is available to dispose of "nearly" all "unclassified" waste through city sanitation service.
(Billings)		No incinerator used at Federal Bldg. in Billings. No open burning.
(Lewistown)		No incinerator used. No open burning.
(Miles City)		No incinerator used. No open burning.
Bureau of Reclamation		
(Huntley Project)	X	Intermittent open burning of household and office waste. One petroleum gas type weed burner using 100 gallons a day for 30 days per year.
(Lower Yellowstone Project)	X	Intermittent burning of household waste and garage wastes. One petroleum gas weed burner using 150 gallons per day for 30 days per year.
(Sun River Project)	X	Intermittent burning of refuse. Propane burner used for removing vegetation from canals. Use 400 gallons per day for 15 days per year.
(Lower Marias)	X	Intermittent burning of household refuse.
(Buffalo Rapids)	X	Intermittent burning of household refuse. Butane weed burner used to burn vegetation along canals, laterals and drain ditches. Use 100 gallons per day for 30 days per year.
(Canyon Ferry)	X	Currently burning dump twice a week. All burning to stop Jan. 1, 1971.
(Fort Peck)	X	Intermittent burning of household refuse.
(Yellowtail)		Burning of trash at this dump has been stopped. Now use landfill.
(Helena Valley)		Burning of trash will continue until January 1, 1971, then stopped. One oil-type weed burner used for removal of vegetation from "facilities" using 150 gallons per day for 30 days per year.
Regional Office (Billings)		No incinerator and no open burning.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Bureau of Reclamation		
Crow Creek Pump	X	Intermittent burning of refuse.
East Bench Unit (Billings)		One oil-type weed burner using 150 gallons per day for 30 days per year.
Canyon Ferry (Townsend)	X	During 1970 wind erosion control program was continued. Existing drift fences were repaired and 1.5 miles reinstalled on east shoreline. A series of three ponds, formed by low dikes, was constructed on west shore. Small gated pipes were installed in the dikes to determine the effectiveness of controlled flooding and ponding for dust control. Approximately 500 feet of a proposed 1,500 foot dike were completed on the east shoreline. About 600 acres were corrugated at 15-foot intervals, and 200 acres were seeded to barley. A plan for permanent dust control was completed and a report prepared. The plan contemplates the construction of dikes and permanent pool maintenance. The evaluation included hydrologic studies, canal capacities, storage requirements, design and economic evaluation. The plan is currently under review.
Glacier National Park	X	The incinerator at Park Headquarters is being phased out and arrangements are being made to use the improved county landfill at West Glacier for all garbage disposal on the west side. On the east side, one of the two incinerators has received major attention to correct deficiencies and the other will be overhauled before being placed in service next summer. Little, if any, slash burning ever occurs in the Park. There may be occasional burning undertaken as old buildings are disposed of. These will be burned to give fire protection personnel training in extinguishing fires and the use of fire equipment.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Bureau of Indian Affairs Blackfeet Agency (Browning)	X	Trash picked up by town of Browning and subsequently burned at their dump. Boarding dormitory has portable gas fired incinerator to be installed before January 1, 1971.
Rocky Boy Agency (Box Elder)	X	Inoperative incinerator at Indian Health Center. The only authorized dumping area on the reservation is near the agency and is a modified landfill that may be burned at any time.
Flathead Irrigation Project (St. Ignatius)		No incinerators. Trash and garbage picked up by community or private hauler and conveyed to dumps operated by them.
Crow Indian Agency (Crow Agency)		Office incinerator removed in 1969. Open trash barrel burning stopped in 1970. Operate landfill dump. Converted heating to natural gas 1967.
Fort Peck Agency (Poplar)		Instituted a "no" open burning policy. Waste disposed of by arrangement with City of Poplar.
(Brockton)		Waste disposed of by community.
(Wolf Point)		Waste disposed of by community.
(Frazer)		Waste disposed of by community.
Northern Cheyenne Agency (Busby)	X	Operate four unapproved incinerators. Trash barrel burning is done. Are investigating installing gas fired approved incinerators. Community dump burns four days each month.
(Lame Deer)	X	Operate one unapproved incinerator. Considering installing approved gas fired incinerator. Community dump burns four days each month. Smoke control installed on teepee burner of Blackfeet Company.
(Ashland)		Use Ashland Town dump. Smoke control equipment installed on Ashland Lumber Company burner in Nov., 1969. Burning of logging and thinning slash are conducted by the agency. No other agricultural burning done.
Flathead Agency (Ronan)		Do not operate any landfills or dumps. Operate slash burning program in forests.

InstallationViolationAction and Status

## Department of Agriculture

Forest Service  
Northern Region

Prescribed burning conducted in accordance with Forest Service "Air Quality Guidelines". Burning is restricted either Regionwide or locally when air quality deteriorates. This includes restrictions in adjoining states where sources affect air quality in Montana. Areas scheduled for treatment are now analyzed to determine if burning is the only acceptable method and if so, then the type of burning is specified that will best accomplish the results with minimum effects on air quality. Studies are underway to determine how much slash can be left untreated without becoming an intolerable fire hazard. Studies are in effect that will provide additional acceptable methods of fuel treatment other than burning and to advance knowledge about using fire as a management tool.

## Slash and other prescribed burning (Montana):

	Acres:
F.Y. 1967	35,400
F.Y. 1968	44,000
F.Y. 1969	24,000
F.Y. 1970	28,000
F.Y. 1971 (7/1/70-11/1/70 only)	37,500

In each of the fiscal years shown, the majority of the burning is done in the fall period.

## Area burned - wildfire (Montana)

C.Y. 1967	3,400
C.Y. 1968	3,600
C.Y. 1969	1,800
C.Y. 1970 (to October 31)	13,200

## Other activities related to air pollution control were:

General

1. About five open dumps which had burning were converted to modified dumps or sanitary landfills where there is no burning.
2. About ten open dumps which had burning were permanently closed.

Dust Oiling and Paving

1. The parking areas and driveways within the Engineering Shops complex at 14th and Catlin, Missoula were dust oiled.

Forest Service  
Northern Region  
Con't.

2. The streets and parking lots at Fort Missoula, southwest of Missoula were dust oiled.
3. The driveways and parking areas at about ten administrative sites were dust oiled.
4. About 50 miles of road on the Kootenai National Forest were paved.
5. About 5 million gallons of water were used for dust abatement on forest roads.
6. In addition, roads were dust oiled as follows:

<u>National Forest</u>	<u>Road Mileage</u>
Lolo	60
Flathead	225
Kootenai	100
Bitterroot	50
Helena	5
Total	440

InstallationViolationAction and Status

Department of Transportation  
Federal Highway Administration

No incinerators used. Authorized use of federal funds to counties or state for dust control on roads used by ABM contractors and suppliers. Direct federal contracts require compliance with state laws on air pollution control including permits. Burning of trees, brush, stumps and slashing prohibited. Support and maintain active and effective air pollution control program.

Department of the Interior  
Bureau of Land Management

Not all the slash produced as a result of timber harvesting on Bureau administered lands in Montana is burned. Mainly, required burning is of large concentrations of slash within a timber sale area. Low volume slash areas are scattered on the ground to afford some soil protection.

Number of acres of slash burning during:

1967 - 1969	1000 clearcut acres
1967 - 1969	2200 seedtree acres
1967 - 1969	400 selective logged
1970 - 1971	1400 acres estimated



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Department of the Interior Bureau of Land Management Con't		The Bureau has in the past, issued special land use permits to towns for dump sites. Prior to the renewal of existing permits, special stipulations will be included converting dumps to a landfill with no open burning being allowed. Several district offices have discontinued the open barrel burning of trash, etc. In the counties of Powell, Granite, and Lewis and Clark, the Bureau requires that all timber sale contractors get burning permits before they do slash burning. As clearcut logging practices are reduced to other forms of logging, the number of acres of burning is expected to be reduced. Hazard reduction will continue using fire as the principal tool.
Department of the Army Corps of Engineers (Libby Project)	X	Enormous amounts of material removed by reservoir clearing operations at Libby Project all being burned. Considering the following for disposal of reservoir drift in the summer and fall of 1972 and 1973: Open burning; spreading in clear cut areas and tilling into the soil; stockpiling suitable drift for fire wood in recreational areas. Relocation: Open burning of all debris from right-of-way clearing project about 98% complete. Asphalt plant required to meet State emissions standards and permit regulations.
Department of the Air Force Malmstrom Air Force Base (Great Falls)	X	No open burning permitted with exception of small quantity of jet fuel for minimal fire fighting training. No excesses of fuel are permitted to be burned during fire fighting training exercises. Four small incinerators for burning classified material and one small incinerator at the base hospital for surgical disposal. No coal-burning boilers. All boilers are fired from natural gas. No burning is permitted at the base sanitary landfill dump. No fuel is disposed of by burning.
Soil Conservation Service		No burning done at Plant Materials Center. Some ditches cleaned by burning (use bottled gas burner). No incinerators used.
Fish and Wildlife Service	X	Reduced smoke emission from lethal bait disposal operation by converting from heavy oil as a fuel to wood. Compliance with air pollution control regulation doubtful.

APPENDIX D  
STATUS OF AIR POLLUTION SOURCES IN  
MONTANA BY COUNTY

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
B E A V E R H E A D   C O U N T Y		
Pfizer, Inc. (Dillon)	X	Baghouse under construction to control emissions from fluid energy mill. Scheduled completion date of January, 1971. Improved filtering material installed in baghouses controlling dust from Raymond Mills. Operating under "Variance" until April 30, 1971. No open burning; refuse picked up.
Clark Canyon Lumber Co. (Dillon)		Built new teepee burner with underfire air system, overfire air ports and dampers.
Safeway (Dillon)		Modified existing incinerator to multiple-chambered type with secondary gas burner and automatic burner controls; approved.
Barrett Hospital (Dillon)		Operate inadequate pathological incinerator which will be shut down when they move into new hospital with new pathological incinerator early in 1971. New incinerator has multiple chambers, secondary gas burner, automatic burner control.
Western Montana College (Dillon)		Own an unapproved incinerator which is not used.
City Dump (Dillon)	X	Commonly burns.
Open Burning (Dillon)		No permits issued for open burning in town.
Dust Control (Dillon)		No program.
B L A I N E   C O U N T Y		
Diamond Asphalt (Chinook)		Doubtful compliance with "sulfur'in-fuel" regulation and forthcoming "petroleum storage" regulation pertaining to hydro-carbon emissions.
Dump (Chinook)	X	Open burning practiced.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
B R O A D W A T E R   C O U N T Y		
Townsend Lumber Company (Townsend)		Installed underfire air system temperature recorder in teepee burner. Burner had overfire air ports with dampers.
Broadwater Hospital (Townsend)	X	Operate unapproved pathological incinerator; single chamber, no burner. Have trash hauled away.
School System (Townsend)	X	Elementary operates unapproved incinerator for some paper disposal; high school operates unapproved incinerator for all paper waste.
Dump (Townsend)	X	Commonly burns.
Open Burning (Townsend)	X	Not controlled.
Dust Control (Townsend)	X	No program.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Great Falls Reduction Works Anaconda Company (Great Falls)	X	Planning to upgrade zinc casting area collection system during 1971. Also to install air pollution control equipment in zinc dross drum area. Operating only a portion of zinc roaster, thereby reducing particulate and sulfur emissions from that of previous years. Open burning stopped. Particulate and sulfur emissions undetermined.
Phillips Refinery (Great Falls)		Embarked on odor control program in 1970. Vapor tight seals and water trap installed on spent caustic tanks. Three crude storage tanks recently vented through hypochlorite trap to reduce emissions. Improved maintenance to prevent spillage and leaks. One of two oil-water separator recently covered, other cover scheduled for completion February, 1971. Non-condensable from sour water strippers incinerated in process furnace. No desulfurization of plant gas. This gas when burned in process heaters exceeds sulfur content allowable under state "sulfur in fuel" standard. No flare.
ASPHALT PLANTS:		
County Shops (Great Falls)		Installed scrubber 1970. Compliance status undefined. All waste hauled to city landfill site. Open burning stopped.
City Road Department (Great Falls)	X	Scrubber installed 1970. When used only for sand drier, considerable quantities of dust emitted from transfer points. Compliance status doubtful. Waste to landfill.
Montana Sand and Gravel (Great Falls)		Scrubber installed 1970. Inplant dust occurs. Conveyor belts, and unpaved roads cause dust. Status undefined.
Northern Materials (Great Falls)		Scrubber installed 1970. Dust coming from conveyor belt produces some dust. Status undefined.
Black Eagle Paving (Great Falls)	X	Investigating improved scrubber.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Krause Paving Company (Great Falls)	X	Unapproved scrubber. Problem of smoke and dust.
BANKS:		
Central Bank of Montana (Great Falls)		Multiple chambered gas fired incinerator.
First Federal Savings and Loan (Great Falls)	X	Single chambered incinerator
Great Falls National Bank (Great Falls)		Multiple chambered gas fired incinerator.
First Westside National Bank (Great Falls)		Multiple chambered gas fired incinerator.
First National Bank (Great Falls)	X	Single chambered incinerator.
Great Falls Federal Savings (Great Falls)		Multiple chambered gas fired incinerator.
Montana Bank (Great Falls)		Multiple chambered gas fired incinerator.
NURSING HOMES AND HOSPITALS:		
Cascade County Convalescent (Great Falls)		Multiple chambered gas fired incinerator.
Montana Deaconess Hospital (Great Falls)		Multiple chambered gas fired incinerator
Deaconess Hospital Nursing Home (Great Falls)	X	Single chambered incinerator.
Park Place Nursing Home (Great Falls)	X	Single chambered incinerator.
Macauley Nursing Home (Great Falls)		No burning. Material is being hauled to landfill site.
Eagles Manor Nursing Home (Great Falls)	X	Single chambered incinerator.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E      C O U N T Y		
SCHOOLS:		
Morningside School (Great Falls)		Operate multichamber incinerator, primary gas burner, manually burner control, no fly ash screen on stack.
Washington School (Great Falls)	X	Single chambered incinerator.
Valley View (Great Falls)		Operate multichamber incinerator, induced-draft fan. Odor problem.
Sunnyside (Great Falls)		Operate dual-chamber incinerator, primary gas burner (not used), manual burner control.
Roosevelt Elementary (Great Falls)	X	Operate multichamber incinerator, primary gas burner, manual burner control. Burns improper waste--smoke and fly ash problem.
Russell Elementary School (Great Falls)	X	Single chambered incinerator.
Paris Gibson Jr. High (Great Falls)	X	Single chambered incinerator.
Meadow Lark School (Great Falls)		Operate multichambered incinerator, primary gas burner, manual burner control, induced-draft fan.
Whittier School (Great Falls)	X	Single chambered incinerator.
Sacajewea Elementary (Great Falls)		Operate multichamber incinerator, primary gas burner, manual burner control, induced-draft fan.
Lewis and Clark School (Great Falls)	X	Single chambered incinerator.
East Jr. High School (Great Falls)	X	Operate multichamber incinerator, primary gas burner, manual burner controls. Smoke, fly-ash problem.
Chief Joseph School (Great Falls)		Operate multichamber incinerator, primary gas burner (inoperative), induced-draft fan, manual burner controls.
Collins Elementary School (Great Falls)	X	Single chambered incinerator.
Emerson Elementary School (Great Falls)	X	Single chambered incinerator.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Franklin School (Great Falls)	XX	Two single chambered incinerators.
Great Falls High School (Great Falls)	X	Single chambered incinerator.
Lincoln School (Great Falls)	X	Single chambered incinerator.
Longfellow School	X	Operate multichamber incinerator, primary gas burner, manual burner controls.
Loy School (Great Falls)	X	Operate multichamber incinerator, induced-draft fan. Burns improper waste, smoke problem.
Lowell Elementary School (Great Falls)	X	Single chambered incinerator.
McKinley School (Great Falls)	X	Burn in boiler.
Riverview School (Great Falls)	X	Operate multichamber incinerator, primary gas burner (inoperative), manual burner control, induced-draft fan. Smoke and fly-ash problem.
Largent School (Great Falls)	X	Single chambered incinerator.
West Jr. High (Great Falls)	X	Operate multichamber incinerator, primary and secondary gas burners, automatic burner controls. Smoke, fly-ash problem.
Ursuline Academy (Great Falls)	X	Single chambered incinerator.
St. Thomas Orphans Home (Great Falls)	X	Single chambered incinerator.
St. Gerard School (Great Falls)	X	Single chambered incinerator.
St. Joseph School (Great Falls)	X	Single chambered incinerator.
Holy Family School (Great Falls)	X	Single chambered incinerator.
College of Great Falls (Great Falls)	X	Operate one single chambered incinerator, gas burner; one multichamber, no burner, induced-draft fan; one multichamber, primary gas burner (rarely used), manual burner control, induced-draft fan.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E C O U N T Y		
School for Deaf and Blind (Great Falls)	X	Single chambered incinerator.
Sts. Peter and Paul School (Great Falls)	X	Single chambered incinerator.
Palisades Elementary (Great Falls)		No burning. All trash hauled away.
Our Lady of Lourdes (Great Falls)		No burning. All trash hauled away.
Mountain View (Great Falls)		Operate multichamber incinerator, primary gas burner, manual burner controls, induced-draft fan.
North Jr. High (Great Falls)		Operate two multichamber incinerators, primary gas burner, manual burner controls, induced-draft fan.
C.M. Russell High School (Great Falls)	X	Operate three multichamber incinerators, primary gas burner, automatic burner controls, induced-draft fan. One has smoke, odor, fly-ash problem.
Skyline (Great Falls)		Operate multichamber incinerator, primary gas burner, manual burner control, induced-draft fan.
Special Education Center (Great Falls)	X	Operate single-chamber incinerator.
Central High (Great Falls)	X	Operate single chambered incinerator.
AUTO SALVAGE - JUNK YARDS:		
Westside Auto Wrecking (Great Falls)	X	Some burning of auto hulks during salvage operation. Also burning of insulation to recover copper wire. No incinerator.
Kenny's Auto Repair (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operation. Also some burning of insulation to recover copper wire.
Weissman and Son's (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also burning of insulation to recover copper wire.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Pacific Hide and Fur (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also some burning of insulation to recover copper wire.
Central Machinery (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also burning of insulation to recover copper wire.
Duncan Auto Salvage (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also some burning of insulation to recover copper wire.
Black Eagle Auto Salvage (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also some burning of insulations to recover copper wire.
Wayth's Auto Salvage (Great Falls)	X	Some burning of auto hulks during salvage operation. No incinerator. Also some burning of insulation to recover copper wire.
Ward's Auto Salvage (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operation. Also some burning of insulation to recover copper wire.
Corby's Auto Salvage (Great Falls)	X	No incinerator. Some burning of auto hulks during salvage operations. Also some burning of insulation to recover copper wire.
TRAILER COURTS, MOTELS, HOTELS, ETC.:		
Handy Trailer Court (Great Falls)		No burning done. No incinerator. Material hauled to city landfill.
Big Sky Trailer Court (Great Falls)		No burning done. No incinerator. Material hauled to city landfill.
D & W Trailer Court (Great Falls)		No burning done. No incinerator. Material hauled to city landfill.
Maders Trailer Court (Great Falls)		No burning done. No incinerator. Material hauled to city landfill.
Russell Trailer Court (Great Falls)	X	Single chambered incinerator.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Woods Trailer Court (Great Falls)		No burning done. Trash hauled away.
Trail's End Trailer Court (Great Falls)		Single chambered incinerator. No burning done. Material is hauled to city landfill.
Alaskan Way Trailer Court (Great Falls)		Single chambered incinerator. No burning.
John's Trailer Court (Great Falls)		Single chambered incinerator. No burning.
Park Hotel (Great Falls)		Single chambered incinerator. No burning.
Sherwood Apartments (Great Falls)	X	Single chambered incinerator.
Glacier Apartments (Great Falls)	X	Single chambered incinerator.
Bitterroot Apartments (Great Falls)	X	Single chambered incinerator.
Yellowstone Apartments (Great Falls)	X	Single chambered incinerator.
Rainbow Hotel (Great Falls)	X	Single chambered incinerator.
Fergus Motel (Great Falls)		Single chambered incinerator. No burning. Material hauled to city landfill.
Bryant Trailer Court (Great Falls)		Single chambered incinerator. No burning. Material is hauled to landfill.
Midtown Motel (Great Falls)	X	Single chambered incinerator.
Newmack's Sahara Motel (Great Falls)		Single chambered incinerator. No burning. Material is hauled to landfill.
Motel Royal (Great Falls)		Single chambered incinerator. No burning. Material is hauled to landfill.
Airway Motel (Great Falls)		Single chambered incinerator. No burning. Material hauled to city landfill.
Pat's Motel (Great Falls)		Single chambered incinerator. No burning. Material hauled to city landfill.
ANIMAL CLINICS:		
Great Falls Vet Service (Great Falls)		Single chambered incinerator. Material hauled to city landfill.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E C O U N T Y		
City Dog Pound (Great Falls)	X	Multiple chambered incinerator, gas fired. Alterations and modifications must be done to meet State standards.
Davis Animal Clinic (Great Falls)		Multiple chambered gas fired incinerator. Alterations and modifications must be made to meet State requirements.
Goodell Animal Hospital (Great Falls)		Incinerator no longer used. Wastes hauled to city landfill.
Meyers Animal Hospital (Great Falls)		Incinerator no longer used. Wastes hauled to city landfill.
Doran's Animal Hospital (Great Falls)		Incinerator no longer used. Waste hauled to city landfill.
East Side Vet Hospital (Great Falls)		Incinerator no longer used. Waste hauled to city landfill.
PUBLIC OFFICES:		
Rocky Mountain Building (Great Falls)		Single chambered incinerator. No burning. Material is hauled to city landfill.
Mather and Associates Bldg. (Great Falls)		Single chambered incinerator. No burning. Material is hauled to city landfill.
Mountain Bell (Great Falls)		Single chambered incinerator. No burning. Waste hauled to city landfill.
The Tribune Building (Great Falls)	X	Operate what was originally multichambered incinerator, now single chambered because in considerable disrepair.
Civic Center (Great Falls)	X	Multiple chambered incinerator. Modifications and alterations must be made to control periodical emissions violations.
U.S. Post Office (Great Falls)	X	Multiple chambered incinerator. Modifications and alterations must be made to meet State emission standards.
Air National Guard (Great Falls)	X	Operate single chambered incinerator, gas burner. Used about one hour per week. This is to burn classified material.
Public Library (Great Falls)		No incinerator. Material is hauled to city landfill site.
Highway Department (Great Falls)	X	Single chambered incinerator. Office waste material burned in this incinerator.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E C O U N T Y		
State Employment Office (Great Falls)		No incinerator. Material being hauled to city landfill site.
County Courthouse (Great Falls)	X	Single chambered incinerator.
GREEN HOUSES:		
Montgomery Wards Floral (Great Falls)	X	Multiple chambered incinerator. Alterations and modifications must be made to meet State standards.
GRAIN ELEVATORS:		
Farmers Union GTA (Great Falls)		Status undefined.
General Mills, Inc. (Great Falls)		Status undefined. Complaints received as to dust and chaff in surrounding neighborhood.
Montana Elevator Company (Great Falls)		Status undefined. Complaints received as to dust problem.
Western Grain Exchange (Great Falls)		Status undefined. Dust and chaff in surrounding neighborhood.
Montana Vegetable Oil and Feed (Great Falls)		Status undefined. Dust and chaff in area.
GRAVEL CRUSHERS:		
Concrete Service Company (Great Falls)		Status undefined. Dust produced at conveyor belts.
Treasure State Industries (Great Falls)		Status undefined. Dust produced at conveyor belts.
Great Falls Redi Mix (Great Falls)		Status undefined. Dusty access road.
Korin Kovack Sand and Gravel Company (Sand Coulee)		Status undefined.
Northern Construction Company (Cascade)		Status undefined.
Northern Materials (Great Falls)		Status undefined.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E C O U N T Y		
SHOPPING CENTERS		
Buttreys (Great Falls)		Multiple chambered gas fired incinerator.
Albertson's (Great Falls)		Multiple chambered gas fired incinerator.
Skaggs (Great Falls)		Multiple chambered gas fired incinerator.
Buttreys Westgate (Great Falls)		Multiple chambered incinerator.
Buttreys (10th Ave.) (Great Falls)		Multiple chambered incinerator.
B's Mart (Great Falls)	X	Single chambered incinerator.
Public Drug (Great Falls)		Single chambered incinerator. Incinerator not in use. Material is being hauled to city landfill.
Jim Dandy Superette (Great Falls)		Single chambered incinerator. Material being hauled to landfill.
Safeway (1st Ave. North) (Great Falls)		Multiple chambered gas fired incinerator.
Valu-Mart (Great Falls)		Own multichambered incinerator which is no longer used. This unit has been welded shut. Waste hauled to landfill.
Safeway (1st Ave. N.W.) (Great Falls)		Multiple chambered gas fired incinerator.
RESTAURANTS:		
Boyd's Burgermaster (Great Falls)		Single chambered incinerator. Not used.
Eddies Supper Club (Great Falls)		Single chambered incinerator. Not used.
BARS:		
Murph's Bowling Center (Great Falls)	X	Single chambered incinerator.
Cock and Bull Bar (Great Falls)		Single chambered incinerator. Not used. Material is hauled to landfill.

InstallationViolationAction and Status

## C A S C A D E   C O U N T Y

Rendezvous Club (Great Falls)		Single chambered incinerator. Not used.
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Reeds Tavern (Great Falls)		Single chambered incinerator. Not used.
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## INDUSTRIAL:

Big Stack Potato Chip Co. (Great Falls)		Single chambered incinerator. Not used. Material hauled to landfill.
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Westland Foods (Great Falls)	X	Single chambered incinerator.
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Great Falls Paper Company (Great Falls)	X	Single chambered incinerator.
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Beatrice Foods (Great Falls)		Multiple chambered gas fired incinerator.
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Buttrey's Warehouse (Great Falls)		Multiple chambered gas fired incinerator.
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## DAIRIES:

Ayrshire Dairy (Great Falls)		No incinerator. Material hauled to land-fill.
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Beatrice Goods - Meadow Gold (Great Falls)		Multiple chambered gas fired incinerator.
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Boston Height Dairy (Great Falls)		No incinerator. Material hauled to land-fill.
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Hansen's All Star Dairy (Great Falls)		No incinerator. Material hauled to land-fill.
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Vita Rich (Great Falls)		No incinerator. Material hauled to land-fill.
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## RAILROADS:

Burlington Northern Yard (Great Falls)		Discontinued use of single chambered incinerator in 1970. All waste hauled to city landfill.
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Milwaukee Road Yard (Great Falls)		Were burning office waste in barrel. This practice has been stopped. Waste hauled to city landfill.
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## BEVERAGE AND FOOD BROKERS:

Coca Cola Bottling (Great Falls)		Operate multichamber incinerator, compressed-air induced draft. This is of approved type.
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<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Pepsi Cola Bottling (Great Falls)		No incinerator. All waste hauled to landfill.
7-Up Bottling Company (Great Falls)		Single chambered incinerator. No burning. Haul waste to landfill.
Devine and Asselstine (Great Falls)		Single chambered incinerator, but not in use. Waste hauled to city landfill.
Gusto Distributing (Great Falls)		Single chambered incinerator, but not in use. Waste hauled to city landfill.
Penningstons (Great Falls)		Single chambered incinerator, but not in use. Waste hauled to city landfill.
TIRE RECAPPING, RETREADING COMPANY:		
General Tire Service (Great Falls)		Status undefined. Smoke and odor reported.
Gus and Jack's Tire Shop (Great Falls)		Status undefined. Smoke and odor reported.
Keith's, Inc. (Great Falls)		Status undefined. Smoke and odor reported.
Nelson Schofield Tire Co. (Great Falls)		Status undefined. Smoke and odor reported.
Northern Re-Lugs (Great Falls)		Status undefined. Smoke and odor reported.
OK Tire Store (Great Falls)		Status undefined. Smoke and odor reported.
Firestone Tire and Rubber Co. (Great Falls)		Status undefined. Smoke and odor reported.
Triangle Tire Company (Great Falls)		Status undefined. Smoke and odor reported.
Wally for Tires (Great Falls)		Status undefined. Smoke and odor reported.
DUMPS:		
City of Great Falls		New method of disposal starting in January, 1970. Trench method is now used. Accidental fires do occur. Stricter supervision set up to correct this problem.
(Fort Shaw, Cascade, Monarch, X Neihart, Stocket, Sand Coulee, Ulm and Belt)		Open burning dumps.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C A S C A D E   C O U N T Y		
Hillcrest Lawn Memorial (Great Falls)	X	Operate multichambered incinerator with oil-fired burner for cremation. Periodic violation of visible emission regulation.
Feedlots (Great Falls)		There are several feed lots in the Great Falls area. Odor problems are reported.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
C U S T E R   C O U N T Y		
Safeway (Miles City)		Relined incinerator with new brick and insulation. Installed secondary gas burner with automatic burner controls.
Buttrey Foods (Miles City)		Replaced unapproved incinerator with approved type; multiple-chambered with secondary gas burner and automatic burner controls.
Miles Community College (Miles City)	X	Operate unapproved incinerator.
Holy Rosary Hospital (Miles City)	X	Operate unapproved incinerator, are planning to replace with approved type.
V.A. Hospital (Miles City)	X	Operate unapproved "Medical waste" incinerator, plan to replace with approved type, summer of 1971. (see federal government listing)
Custer County Rest Home (Miles City)	X	Operate unapproved incinerator.
First National Bank First Secutiry Bank & Trust (Miles City)	X	Operate unapproved incinerators.
School System (Miles City)		No burning, all trash hauled away.
Dump (Miles City)	X	Landfill, but burns occasionally.
Open Burning (Miles City)		Prohibited and enforced in city.
Dust Control (Miles City)		No program.
D E E R   L O D G E   C O U N T Y		
Anaconda Reduction Works (Anaconda)	X	Plan to install 600 ton acid plant on copper roasting system, reducing sulfur oxide emission and also aiding in particulate emission reduction. Plans under-way to improve hooding and ductwork in the reverberatory-converter building thereby providing improved working environment. This latter innovation will only transfer emission point from the building roofline to the stack exit unless efficiency of pre-1920 vintage electrostatic precipitator is much improved.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
D E E R   L O D G E   C O U N T Y		
Anaconda Reduction Works Con't.		Lime kilns, unloading areas and crusher are other particulate emission points that need control. Arrangements made for landfill but some open burning still exists. Present particulate emission equals 51 tons per day (allowable 2 tons per day). Present sulfur emission equals 327 tons per day. Sulfur dioxide emission equals 654 tons per day. Allowable sulfur emission equals 43 tons per day. (86 tons SO <sub>2</sub> on June 30, 1970)
Safeway (Anaconda)		Rebuilt walls in multiple-chambered incinerator and installed secondary gas burner and automatic burner controls.
Buttrey Foods (Anaconda)		Installed secondary gas burner, induced-draft fan and automatic burner controls on existing multiple-chambered incinerator.
Community Hospital (Anaconda)	X	Operate unapproved single-chambered incinerator with three gas burners; burns all paper and dressings.
School System (Anaconda)		Have trash hauled away.
Dump (Anaconda)	X	Commonly burns
Open Burning (Anaconda)	X	Not controlled, no permit system.
Dust Control (Anaconda)		No program.
F E R G U S   C O U N T Y		
Berg Post Yard (Lewistown)		Stopped using creosote 7-17-70. Converting to "penta" treatment.
C & M Lumber Company (Lewistown)	X	Patched up all unnecessary holes in burner; installed new blower and grate supplementing underfire air system; improved overfire air ports and dampers do not have thermocouple and temperature recorder. No open burning.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Robert Tindall Asphalt (Lewistown)		Installed wet scrubber, efficiency unknown.
Central Montana Hospital (Lewistown)		Status undefined.
Safeway (Lewistown)		Discontinued use of incinerator. Trash hauled away.
Buttrey Foods (Lewistown)		No burning. Trash hauled away.
School System (Lewistown)		No burning. Trash hauled away.
Dump (Lewistown)		Landfill-type operation. No burning.
Dust Control (Lewistown)		Paving program in progress. No oil or water spraying program.

## F L A T H E A D C O U N T Y

Anaconda Aluminum Company (Columbia Falls)	X	Recent installed baghouse on coke handling facility. Modification in 1969 resulted in better collection at the pots thereby reducing fluoride emission from the estimated 7500 pounds per day to 5000 pounds per day. Construction is started on major scrubber alterations to increase these efficiencies and reduce fluoride emissions to an estimated 2500 pounds per day. The construction may also reduce the visible emission. Completion of this project is expected in April, 1971. To meet regulations effective in June, 1973, total emissions must be reduced to less than 864 pounds per day of fluoride. This will likely involve installing a secondary collection system to treat the emissions not collected in the existing primary system. These emissions now escape to the atmosphere through the roof vents.
Rocky Mountain Lumber (Columbia Falls)		One teepee burner operation discontinued in spring of 1970. New gas fired boiler replaced wood fired boiler in summer of 1970. Teepee burner modified with under- fire-overfire air control and temperature recording equipment. An order to take corrective action for teepee burner com- pliance was sent in August, 1970. Open burning prohibited.

InstallationViolationAction and Status

## F L A T H E A D   C O U N T Y

Plum Creek Lumber Company  
(Columbia Falls)

Wood fired boilers modified for efficient burning. Smoke meters installed. One teepee burner eliminated. Two teepee burners (one new) modified with Lausman air pollution control equipment. Open burning prohibited. Yard dust suppression: partial blacktopped with dust suppression oil used once or twice a year.

Stoltz Land and Lumber  
(Columbia Falls)

New teepee burner installed in 1968 with underfire-overfire air modification and temperature recording equipment. Small log mill being built with wood waste to go to existing burner. Feed system improved on existing wood fired boilers for more efficient burning. Smoke meter installed on boiler stack for better control. Open burning prohibited.

C & C Plywood  
(Kalispell)

One teepee burner eliminated with the other one being patched. Underfire-overfire air control and temperature equipment. The burner is used about two days per week, cutting down on burning time. Combination wood and gas fired boilers have been installed for fairly efficient burning. Plans are for another wood fired boiler to be installed in the near future, possibly eliminating the teepee burner. Open burning prohibited. Main roads in yard oiled occasionally.

Kalispell Pole and Timber  
(Kalispell)

Silo type burner not being used. Pole peelings are used for fill material nearby. Open burning prohibited. No yard dust suppression.

Klinger Lumber  
(Kalispell)

Teepee burner has been repaired and modified with under-fire overfire air control and temperature measuring equipment. Mill ends are hogged and blown into the burner for hotter and more efficient burning. Boiler is gas fired. Open burning is prohibited. No yard dust suppression.

Kal-Mont Lumber Company  
(Kalispell)

The mill has been shut down during the summer and fall of 1970. The two teepee burners have not been used. A wood fired boiler has not been operated. Open burning prohibited.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
F L A T H E A D   C O U N T Y		
O'Neil Lumber Company (Kalispell)		Wood waste is stockpiled with no burning. Open burning prohibited. Some oil used in yard dust suppression.
Montana Saw (Kalispell)		Teepee burner repaired and modified with underfire-overfire air control and temperature recording equipment. Chipper installed; some shavings go to a cattle feed lot operation. Plans are to eliminate the burner within a short time. Open burning prohibited.
Broerder Lumber Company (Creston)		Teepee burner repaired with underfire-overfire air control and temperature measuring equipment. Boiler is oil fired. Open burning prohibited. Dust suppression oil applied once a year to heavy use areas.
Coram Lumber Mill (Coram)		Teepee burner repaired with underfire-overfire air control and temperature measuring equipment. Open burning prohibited.
American Timber Company (Olney)		Teepee burner modified with air controls and temperature measuring equipment. Burner is operated for approximately two days per week thus cutting down on burning time. Open burning is prohibited. Water sprinkler used for about three weeks in summer for dust suppression.
Montana Plywood (Whitefish)		No modification on teepee burner. Burning discontinued in teepee burner after order to comply with regulations was issued in August, 1970.
Turner Post Yard (Columbia Falls)		Status undefined.
Supermarket Incinerators (Kalispell)		Discontinued burning or have installed approved type. Individual status undefined.
Hospital Incinerator (Kalispell)		Approved multiple chambered incinerator with two secondary burners.
School System (Kalispell)		Most schools are not burning. Non-scheduled burning at city dump. Individual status undefined.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Garbage and Trash (Kalispell)	X	Municipal pickup. Non-scheduled burning of city dump on infrequent occasions.
Dust Control (Kalispell)		Most streets are paved. Some sweeping and washing of main thoroughfare.
Supermarket Incinerators (Columbia Falls)		Discontinued use. Individual status undefined.
Garbage and Trash (Columbia Falls)	X	Commerical pickup. Burning at city dump.
Dust Control (Columbia Falls)	X	Streets are very dusty. No program.
Supermarket Incinerator (Whitefish)		Approved type.
School System (Whitefish)	X	Unapproved types in use. Individual status undefined.
Garbage and Trash (Whitefish)	X	Municipal pickup. Regular burning at city dump.
Dust Control (Whitefish)		Most main streets paved with some sweeping and washing of main thoroughfare.
Garbage and Trash (Big Fork, Sommers, Lakeside Nyack, Essex, Marion, Kila, Bitterroot Lake and Olney)	X	All operate dumps with periodic landfill and unscheduled burning.
School System (Bigfork)		No burning.
School System (Somers)		No burning.
Garbage and Trash (Coram)	X	Uses dump at Martin City.
School System (Coram)		No burning.
Garbage and Trash (Hungry Horse)	X	Uses dump at Martin City.
School System (Hungry Horse)		No burning.
Garbage and Trash (Martin City)	X	Open burning dump being operated.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
F L A T H E A D   C O U N T Y		
School System (Martin City)		No burning at school.
Garbage and Trash (West Glacier)		No commerical or private pickup. Dump is maintained by landfilling periodically.
School System (West Glacier)		No open burning.

## G A L L A T I N   C O U N T Y

Cherry Lane Farms (Three Forks)		Installed approved multiple-chambered incinerator with primary and secondary gas burners.
Ideal Cement Company (Three Forks)		Building new plant to replace major portion of existing facilities. Modern dust control techniques will be incorporated. Under variance. Completion date of 1973. Present particulate emission equals 22 tons per day. Allowable particulate emission equals .75 tons per day.
United Sierra Division of Cyprus Mines Corp. (Three Forks)		Installing baghouses on two fluid energy mills. Scheduled completion date of Dec. 1, 1970. Bid awarded for installation of baghouse on compactor unit. Probably completion date of March, 1971. Operating under variance.
Kanta Products (Three Forks)	X	Enlarging kiln prior to starting 1971 season. Installation of a cyclone or scrubber will be included as part of the project.
Idaho Pole Company (Bozeman)		Installed three auxiliary gas burners in teepee burner; reduced size of exhaust opening in burner. No open burning.
Clopton Lumber Company (Bozeman)		Have stopped burning in teepee burner. No open burning.
Pioneer Ready Mix (Bozeman)		Dust from dryer fairly well controlled with wet scrubber preceded by cyclone collector.
Elk Studs (West Yellowstone)		Operate teepee burner with overfire ports and dampers, underfire air system, temperature recording device. Burner in poor condition, has poor record of compliance. No open burning.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Yellowstone Pine (Belgrade)		Installed new teepee burner with over-fire ports, dampers, underfire air system including blowers and grates. Installed new wood-waste boiler with fly ash collector. They are usually in compliance.
Trash and Garbage (Three Forks)	X	Landfill-type operation but burns part time.
Open Burning (Three Forks)	X	Not controlled except for nuisance calls.
Dust Control (Three Forks)		Treated all unpaved streets with dust suppressant.
Safeway (Bozeman)		Installed secondary gas burner and automatic burner controls in multiple-chambered incinerator; no open burning.
Buttrey Foods (Bozeman)		Installed multiple-chambered incinerator with secondary gas burner and automatic burner controls. No open burning.
Montana State University (Bozeman)		See State listings.
Garbage and Trash (Bozeman)	X	Partial sanitary landfill; burn brush, scrap lumber, etc., about four times a year.
Open Burning (Bozeman)		Well controlled in city.
Dust Control (Bozeman)		Sprinkle with water occasionally, but no other program.
Garbage and Trash (West Yellowstone)	X	Partial landfill-type operation which burns occasionally.
Open Burning (West Yellowstone)	X	Not controlled except for nuisance calls.
Dust Control (West Yellowstone)	X	No program.
Garbage and Trash (Belgrade)	X	Partial landfill-type operation but burns frequently.
Open Burning (Belgrade)	X	Not controlled except for nuisance calls.
Dust Control (Belgrade)	X	No Program.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Garbage and Trash (Manhattan)	X	Partial landfill-type operation but burns frequently.
Open Burning (Manhattan)	X	Not controlled except for nuisance calls.
Dust Control (Manhattan)		No program.

## G R A N I T E C O U N T Y

Berklund Lumber (Hall)		Installed forced underfire air system, overfire air ports and dampers, and temperature recorder; often in violation. Considering alternate means of disposal.
Northern Timber Company (Philipsburg)		In existing teepee burner, installed forced return-air system, reduced exhaust opening, repaired shell, up-graded underfire air system, and installed temperature recorder. Fair record of compliance.
Pintlar Forest Products (Philipsburg)	X	Installed underfire air system, overfire air ports without dampers, no temperature recorder; installed forced return air system and reduced exhaust openings; burner in poor physical condition. Poor record of compliance. Not in operation at the present time.
Sorenson Brothers Lumber Co. (Drummond)	X	Installed underfire air system and overfire air ports, no dampers or temperature recorder. Burner in poor physical condition, often in violation.

## H I L L C O U N T Y

Stockyards (Havre)	X	Citizens complain of odors.
Post Yard (Havre)	X	Treat Posts with creosote. Odor complaints.
Safeway (Havre)		Installed secondary gas burner with automatic burner control on existing multiple chamber incinerator.
Buttrey Foods (Havre)		Stopped burning in incinerator. City pickup.
Garbage and Trash (Havre)	X	Open burning practiced.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
L A K E   C O U N T Y		
Plum Creek Lumber Co. (Pablo)		Installed new teepee burner with Lausman pollution control equipment. Open burning prohibited. Wood fired boiler modified for efficient burning and pollution control equipment installed. Good control.
Dupuis Bros. Lumber (Polson)	X	Mill not in compliance. Under variance until April 1, 1971. Modifications underway to cease burning in both teepee burners. Boilers to be modified to efficiently burn hogged bark by April 1, 1971.
Pack River Plywood (Polson)		Operation of teepee burner discontinued. Open burning prohibited.
Dust Suppression (Polson)		Main streets paved and some secondary streets given oil application during summer. Street sweeper used in business district. Dust suppression not adequate.
Open Burning (Polson)	X	Prohibited but enforcement not complete.
Garbage and Trash (Polson)	X	Private pickup available. Planning stage for Polson area and central county landfill dump. Dump burning at present.
School System (Polson)	X	Incinerators unapproved type.
Hospital (Polson)		Gas fired incinerator. Biological waste shipped to Missoula hospital.
Food Stores (Polson)		No burning.
Dust Suppression (Ronan)		New paving in business district. Some oil application to secondary streets. Dust suppression not adequate.
Open Burning (Ronan)	X	Prohibited but enforcement not complete.
Garbage and Trash (Ronan)	X	Private pickup available. Dump burning at present time.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
L A K E C O U N T Y		
School System (Ronan)	X	Unapproved incinerator.
Hospital (Ronan)	X	Unapproved incinerator.
Food Store (Ronan)		No burning.
Dust Suppression (St. Ignatius)		New paving and sidewalks on main street.
Garbage and Trash (St. Ignatius)		Private pickup available. Landfill dump being operated with no burning.
School System (St. Ignatius)	X	Incinerator unapproved.
Hospital (St. Ignatius)	X	Federal installation. Probably unapproved incinerator. Some paper and trash hauled to dump.
Garbage and Trash (Pablo)	X	Private pickup available, open burning dump being operated.
School System (Pablo)	X	Unapproved incinerator.
School System (Arlee)	X	Unapproved incinerator.
Garbage and Trash (Arlee)	X	Open burning dump being operated.
School System (Arlee)	X	Unapproved incinerator.
Garbage and Trash (Charlo)		Private garbage pickup available.
School System (Charlo)	X	Unapproved incinerator.
Garbage and Trash (Elmo)	X	Open burning dump being operated.
Garbage and Trash (Swan Lake and Ferndale)		Garbage at dump is covered over monthly.

InstallationViolationAction and Status

## L E W I S   A N D   C L A R K

Anaconda Slag Treating  
(East Helena)

X

Installed a baghouse on coal plant in 1970, black dust controlled engineering underway to enlarge fan on main flue to provide adequate draft to control tapping operation. Control of fume from charging area will either be included in above program or handled as a separate project. Refuse disposed of by burying in slag pile. Estimated sulfur emissions equal 5.6 tons per day. Sulfur dioxide emission equal 11.2 tons per day. Estimated particulate emissions equal 1 ton per day.

American Chemet  
(East Helena)

Enclosed track shed in 1970, thereby preventing raw material from becoming windborne. Since 1966 four new baghouses were installed for particulate emission control. Refuse disposed of by city pickup and landfill, but open burning of bags to recover usable material still in practice. Investigating an efficient incinerator. Sulfur emission negligible.

American Smelting and  
Refining Company  
(East Helena)

X

Baghouse for furnace emission control installed in 1900, electrostatic precipitator for sinter belt particulate emission control installed in 1918. Sinter plant emission likely in violation of emission standard in spite of electrostatic precipitators. Estimate total sulfur emission of 131 tons per day. Sulfur dioxide emission equals 262 tons per day. In an effort to better disperse the sulfur emission, a stack heater and booster fan were constructed in 1969 and a stack cone added in the summer of 1970. Preliminary ambient air readings yield little improvement from these modifications. Compliance with particulate regulation undetermined. Emissions include arsenic, lead, and cadmium. Allowable sulfur emission under regulation effective June 30, 1970 equals 7.8 tons per day.

Caird Engineering  
(Helena)

X

No control device on cupola furnace. Operates about two hours per week in violation. No open burning.

U.S. Plywood  
(Silver City)

X

Installed overfire draft with dampers, underfire air system including blowers and grates in existing teepee burner. Do not have thermo-couple and recording pyrometer.

47  
L E W I S   A N D   C L A R K

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Bonanza Packing Co. (Helena)	X	Installed condenser in cooker stack, plan to install afterburner in series with condenser. Odor not properly controlled at present.
Buttrey Foods (Helena)		Installed approved multiple-chambered incinerator with secondary gas burner and automatic burner controls. Stopped open burning.
Safeway (Helena)		Installed approved multiple-chambered incinerator with secondary gas burner and automatic burner controls. Stopped open burning.
Albertson's (Helena)		Modified existing multiple-chambered incinerator with secondary gas burner and automatic burner controls, and barometric damper: approved.
School Systems (Helena)		No burning at any schools.
Banks (Helena)		Union Bank uses approved multiple-chambered incinerator; remainder of banks have waste hauled away.
Aeronautics Commission (Helena)		Discontinued use of incinerator. Trash will be hauled away. No open burning.
Trash and Garbage (Helena)	X	Sanitary landfill but still burn occasionally.
Open Burning (Helena)	X	Well controlled in city by prohibiting Not very well controlled outside city.
Dust Control (Helena)		Spray used motor oil on dustiest streets occasionally. No program for paving or spraying.
Trash and Garbage (East Helena)	X	Landfill type operation, but burn occasionally.
Open Burning (East Helena)	X	Not very well controlled.
Dust Control (East Helena)		Sprinkle with water occasionally. Spray oil on all streets planned for spring of 1971.

InstallationViolationAction and Status

## L I N C O L N   C O U N T Y

Zonolite, Construction Pro-  
ducts Division, W. R. Grace  
& Company  
(Libby)

X

This is a major dust source in a valley with very limited ventilation. Decision recently made to replace most of existing facilities with new plant, incorporating into the design the latest in air pollution control methodology. Preliminary engineering now underway as the first step in a three year program. Operating under "variance" which so far covers first year.

St. Regis Forest Products  
(Libby)

The three teepee burners have been put out of operation. All wood waste is hogged for boilers. Boiler emission may not be in compliance but will require testing. Hydrocarbons from veneer dryers are visible and emissions may be in violation. Open burning prohibited. Yard dust suppression by applying oil to heaviest traveled part of yard twice a year.

Idaho Cedar Sale  
(Troy)

The teepee burner has been repaired and modified with air control. Open burning prohibited.

St. Regis Forest Products  
(Troy)

X

No teepee burners. Wood fired boilers have not been tested for emissions but appear to be in compliance. Open burning prohibited with complete enforcement lacking.

Cripe Lumber Company  
(Troy)

X

Teepee burner modified with air control and temperature measuring equipment. Open burning prohibited but not completely enforced.

Kennedy Stevens Lumber  
(Eureka)

X

Were not in compliance in summer of 1970 and enforcement action begun in August of 1970. Two teepee burners have been modified with air control and temperature measuring equipment. Open burning prohibited. Yard dust suppression to be done by purchase of water sprinkler.

Tobacco River Lumber Company  
(Eureka)

X

Teepee burner modified with overfire and underfire air control and temperature measuring equipment. Issued a notice of violation and order to take corrective action on November 12, 1970. Open burning prohibited.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
L I N C O L N   C O U N T Y		
Ksanka Lumber Company (Fortine)		Teepee burner modified with underfire and overfire air control and temperature measuring equipment. One burner discontinued in spring of 1970. Oil applied to roads. Open burning prohibited.
Plum Creek Lumber (Fortine)		Burner modified with underfire and overfire air control and temperature measuring equipment. Plans underway for a larger burner to replace existing burner. Lausman pollution control equipment to be installed. Open burning prohibited. Main roads to mill treated with oil for dust suppression.
Dust Suppression (Eureka)		Main streets surfaced. Some oil treatment for dust control.
Supermarket Incinerator (Eureka)		No burning observed.
School System (Eureka)	X	Unapproved incinerators.
Garbage and Trash (Eureka)	X	Municipal pickup. Non-scheduled burning of dump.
Dust Suppression (Libby)	X	Principal streets surfaced. Some summer oil application for dust control.
Supermarket Incinerator (Libby)		No burning observed.
Garbage and Trash (Libby)	X	Commercial pickup. Non-scheduled burning of dump. Planning stage for central landfill dump.
Hospital (Libby)	X	Incinerator of non-approved type. Biological waste sent to Kalispell.
Dust Suppression (Troy)		Some streets surfaced.
Supermarket Incinerator (Troy)	X	Non-approved type.
School System (Troy)	X	Grade school has trash hauled to dump. High school uses non-approved type incinerator.
Garbage and Trash (Troy)	X	Non-scheduled burning of dump.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
M E A G H E R C O U N T Y		
Vollstedt Kerr Company (White Sulphur Springs)	X	Two (2) teepee burners with underfire air systems, overfire air ports and dampers, thermocouples and temperature recorders. South burner usually in compliance; north burner rarely in compliance.
Mountain View Memorial Hospital (White Sulphur Springs)	X	Barrel-burning all waste.
School System (White Sulphur Springs)	X	Barrel-burning all trash.
Garbage and Trash (White Sulphur Springs)	X	Commonly burns.
Open Burning (White Sulphur Springs)	X	Not controlled, barrel-burning widespread.
Dust Control (White Sulphur Springs)		No program.
M I N E R A L C O U N T Y		
Diamond National Corp. (Superior)		New teepee burner installed with Lausman pollution control equipment in July, 1970. Wood fired boiler feeding system improved for compliance. Open burning prohibited.
Superior Lumber Company (Superior)		Teepee burner repaired and modified with underfire overfire air control and temperature recording equipment. Open burning prohibited. An order to take corrective action for teepee burner compliance will be sent.
Supermarket Incinerators (Superior)		No burning. Trash and garbage hauled to dump.
School System (Superior)		No burning. Trash and garbage to dump.
Garbage and Trash (Superior)	X	Commercial pickup available. Non-scheduled burning-planning stage for landfill dump.
Dust Control (Superior)		Most streets paved. Some washing of main thoroughfare in summer.

InstallationViolationAction and Status

## MISSOULA COUNTY

Hoerner-Waldorf  
(Missoula)

X

The emissions from this plant appear to be the major source of the serious odor and particulate problem in the Missoula Valley. Attempts in the past to improve the situation by equipment installations and process modifications have yielded little positive results. Recently the company has embarked on a multi-million dollar program to drastically alter the process which, judging from the success of an Oregon firm using similar methods, should reduce odor and particulate emission levels to within State standards. The first phase of the project is scheduled to be completed by June, 1971 and is expected to reduce odor and particulate emissions by 50%. The final phase of the project is scheduled for completion in October, 1972.

The plant has been granted a variance by the State Board of Health to allow operations during the first year of the project.

Van Evan Company  
(Missoula)

Expected completion in April, 1971 of new hogged fuel boiler to take wood waste now fed to teepee burner. Teepee burner will cease operation. A purportedly low emission infrared veneer dryer will soon be installed, which, if proven satisfactory will lead to the replacement of the remaining dryers with the low emission type.

Evans Products  
(Missoula)

This recently constructed plant is still in the shake down phase. Clogging of the material conveying system has several times resulted in a heavy dust emission. Equipment modification and additional controls may be necessary.

The Borden Company  
(Missoula)

The plant is still under construction. It is doubtful an air pollution problem will result from its operation.

White Pine Sash Company  
(Missoula)

Discontinued use of wood waste burner. High temperature boiler plant meets standards. It is under permit.

Associated Asphalt & Company, Inc.  
(Missoula)

Installed air-pollution control equipment on Pioneer Plant so that it meets standards.

InstallationViolationAction and Status

## M I S S O U L A   C O U N T Y

Pyramid Lumber Company (Missoula)		Discontinued use of one wood waste burner and improved operation of second burner to meet standards.
Intermountain Lumber (Missoula)	X	Terminated operation of one plant and installed a high temperature boiler to burn hog fuel within standards. They are presently installing a wood-chipper to replace existing teepee burner.
Anaconda Forest Products (Bonner)	X	Terminated use of old boiler plants after installing a new high temperature boiler plant to burn hog fuel within standards. Eliminated two teepee burners from operation.
M & S Construction Company (Missoula)		Installed water spray equipment on the rock crusher to comply with standards.
Mount Lolo Lumber Company (Missoula)		Discontinued use of teepee burner. Waste to be utilized at particle board plant (operating now discontinued).
Hamilton Lumber Company (Missoula)		Discontinued teepee burner. Wood waste is now used for particle board and hog fuel by Hoerner-Waldorf.
Nicholson Paving (Missoula)		Installed air pollution control equipment on asphalt batch plant.
Western Montana National Bank (Missoula)		Upgraded existing incinerator to meet standards.
St. Patrick's Hospital (Missoula)		Improved operation of incinerator to meet standards.
Missoula Community Hospital (Missoula)		Installed new pathological incinerator.
East Gate Drug Store (Missoula)		Installed new incinerator to meet standard.
Target Range School (Missoula)		Installed new incinerator. Discontinued open burning.
Gibson's Products (Missoula)		Improved operation of incinerator to meet standards.
Bank of Montana (Missoula)		Installed new incinerator to meet standards.
Buttrey's Food Stores (East Gate) (Missoula)		Installed third chamber and after burner on existing incinerator to meet standards.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
M I S S O U L A   C O U N T Y		
Buttrey's Food (Tremper's) (Missoula)		Installed third chamber and after burner in existing incinerator to meet standards.
Washington Construction Company (Missoula)		Installed water sprays on rock crusher equipment to comply with standards.
Missoula County Road Department (Missoula)		Purchased and put into operation a new Barber Green Asphalt Plant which operated within state standards.
Albertson's Food Store (Missoula)		Installed a new Joseph Goder Incinerator. Eliminated old incinerator.
South Side National Bank (Missoula)		Installed a new incinerator to comply with regulations.
Oscro Drug (Missoula)		Upgraded existing incinerator to comply with standards.
Safeway (Missoula)		Installed a new incinerator to comply with standards.
Skagg's Drugs (Missoula)		Eliminated single chambered incinerator and now haul all paper to landfill.
Newberry's (Missoula)		Discontinued use of incinerator and now haul all paper to landfill.
School System (Missoula)		All schools in Missoula have discontinued open burning and now have garbage pickup service.
Bitterroot Market (Missoula)		Discontinued old incinerator and using garbage haul service.
Dee's Market (Missoula)		Discontinued old incinerator and using garbage haul service.
McClay's (Missoula)		Discontinued open burning and now using garbage hauling service.
Daily's Meat (Missoula)		Stopped open burning of paper and haul to landfill.
Westmont Tractor (Missoula)		Stopped open burning of paper and haul to landfill.
Rangitsch Brothers Mobile Homes (Missoula)		Stopped open burning of waste and haul to landfill.

InstallationViolationAction and Status

## MISSOULA COUNTY

Salvage Operation (Missoula)		All salvage operations in Missoula County have discontinued burning.
Open Burning (Missoula)		Allowed only for agriculture and forestry practices. No demolition fires in Missoula area.

## PARK COUNTY

Burkland Studs (Livingston)		West teepee burner in violation, court action pending. Since initiation of legal action, have tightened up and repaired burner extensively, installed new underfire air system. Efficiency of burner with modifications unknown. East burner usually in compliance.
Park Lumber Company (Livingston)		Operate one (1) teepee burner with underfire air system, overfire air ports with dampers and temperature recorder. Burner in good condition usually operates in compliance. No open burning.
Brand S Lumber Company (Livingston)	X	Operate one (1) teepee burner with underfire air system, overfire air ports with dampers, no temperature recorder. Usually in compliance. No open burning.
Burlington-Northern Railroad Yard (Livingston)		Oil filter incinerator not being used. Has been welded shut; filters disposed of by burying. No burning of any kind in yard.
Eggar Construction Service (Livingston)		Installed wet scrubber on asphalt plant, efficiency unknown.
Safeway (Livingston)		Installed secondary gas burner and burner controls on multiple-chambered incinerator; approved.
Livingston Memorial Hospital (Livingston)	X	Operate unapproved pathological incinerator; single-chambered incinerator, one gas burner. No plans to upgrade.
School System (Livingston)	X	Occasionally operate one incinerator at high school. Single chambered, no burners; not in compliance. All other trash hauled away.
Garbage and Trash (Livingston)	X	Burns occasionally.



InstallationViolationAction and Status

## P A R K   C O U N T Y

Open Burning (Livingston)	X	Not controlled. Permits are freely given for any application.
Dust Control (Livingston)		Graveled all unpaved streets.

## P O W E L L   C O U N T Y

Rocky Mountain Phosphate Co. (Garrison)	X	Installed high efficiency scrubber (Teller Scrubber) for fluorides removed in November, 1968. Enlarged pond for fluoride reduction in February, 1970. Improved dust collection system at sacking shed on September, 1969. Stopped open burning. Have applied additional dust collectors on soda ash unloading and additional dust collection facilities on order.
H & D Tie and Timber (Garrison)	X	Operate teepee burner with underfire air system, overfire air ports with dampers, no temperature recorder. Poor record of compliance.
Northern Timber Company (Deer Lodge)		Installed return-air system, reduced size of exhaust opening, repaired shell, upgraded underfire air system and installed temperature recorder in existing teepee burner. Fair record of compliance.
Safeway (Deer Lodge)		Relined existing multiple-chambered incinerator and installed secondary gas burner with automatic burner controls; approved.
Garbage and Trash (Deer Lodge)	X	Commonly burns.
Open Burning (Deer Lodge)	X	Not controlled.
Dust Control (Deer Lodge)		No program.

## R A V A L L I   C O U N T Y

S & W Sawmill (Darby)		Installed hog-fuel boiler to burn all wood waste; operate teepee burner only about four times per year for overflow from boiler.
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InstallationViolationAction and Status

## R A V A L L I C O U N T Y

Waleswood Lumber (Darby)		Operate teepee burner with overfire air ports and dampers forced underfire air system, forced overfire air, and temperature recorder. Some repairs to shell necessary.
Del Conner Lumber Company (Conner)		Operate teepee burner with forced underfire air system, overfire air ports and dampers, and temperature recorder. Burner probably exceedingly too large for amount of waste.
S & W Sawmill (Conner)		Operate teepee burner with forced underfire air system, overfire air ports and dampers, and temperature recorder. Burner is in good physical condition.
Safeway (Hamilton)		Installed secondary gas burner with automatic burner controls on existing multiple-chambered incinerator; approved.
Daly Memorial Hospital (Hamilton)	X	Operate unapproved single-chambered incinerator. New hospital with new incinerator is being planned.
School System (Hamilton)	X	Barrel-burning all paper waste; are investigating alternate means of disposal.
Garbage and Trash (Hamilton)		No burning, landfill-type operation.
Open Burning (Hamilton)	X	Not controlled.
Dust Control (Hamilton)		Have oiled 90% of unpaved streets; have program to oil remainder.

## S A N D E R S C O U N T Y

Flodin Lumber Company (Thompson Falls)		Teepee burner modified with underfire overfire air control and temperature recording equipment. Plans to increase underfire grates and stockpile in burner for decreased smoke emissions. Open burning prohibited.
Thompson Falls Lumber (Thompson Falls)	X	Mill not in compliance. Under variance until May 23, 1971. Teepee burner patched with air control for more efficient burning. Work progressing on new wood fired boiler. Teepee burning to be discontinued by variance deadline. Mill yard blacktopped summer of 1969. Open burning; Notice of Violation sent.
	X	

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
S A N D E R S   C O U N T Y		
Diehl Lumber Company (Plains)		One teepee burner discontinued fall of 1969. Old wood fired boilers replaced by new wood burning boiler which is designed for efficient burning. Open burning prohibited. Yard was blacktopped summer of 1969.
Durable Wood Products (Trout Creek)		Two teepee burners modified with under-fired overfire air control and temperature measuring equipment. Open burning prohibited. Plans underway for further modification on one burner for more efficient combustion.
School Incinerators (Thompson Falls)	X	Unapproved type. Burning permit to be denied.
Garbage and Trash (Thompson Falls)		Private pickup available.
Dust Suppression (Thompson Falls)		New paving and oil applied to most streets during past summer.
Food Store Incinerator (Hot Springs)	X	Unapproved type.
School Incinerator (Hot Springs)	X	Unapproved type.
Hospital Incinerator (Hot Springs)		Hauled to dump. No burning biological waste not incinerated at this location.
Garbage and Trash (Hot Springs)		Private pickup available.
Open Burning (Hot Springs)	X	Prohibited but not fully enforced.
Dust Suppression (Hot Springs)		Most streets have been paved.
Garbage and Trash (Trout Creek)		Modified landfill dump on Forest Service land. No burning.
Garbage and Trash (Noxon)		Modified landfill on Forest Service land. No burning.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
S I L V E R     B O W     C O U N T Y		
Stauffer Chemical Company (Butte)	X	Increased the water flow rate on kiln spray towers and introduced lime to assist in fluoride emission reduction. In 1969 installed scrubbers on kiln and proportioning building. Also in 1969, grass was planted in the pond area and dust suppression sprays were installed to keep down pond dust emission. Hydrogen sulfide controlled by adding burner and monitoring combustion with the "Bailey" meter. Control equipment for furnace presently being installed. Expected completion date of January, 1971. Two scrubbers scheduled for installation by spring, 1971 on nodule coolers and vent system. These equipment installations and modifications to the plant are expected to accomplish a major emission reduction. Operating under a "variance". Open burning stopped. Dispose of refuse in landfill. Present particulate emission = 6500#/day. Allowable particulate emission = 2400#/day. Present fluoride emission = 400#/day. Allowable fluoride emission as of 6/30/71 = 80#/day.
Berkeley Pit (Butte)		Dust suppressants applied to roadways. Maintenance programs on diesel engines reduced smoke emission. Investigating conveyor systems to cut down on truck usage.
Weed Concentrator (Butte)		Efficient hydrogen sulfide scrubbing. Monitoring system set up to detect any significant emissions.
Montana Pole & Treating (Butte)		In existing teepee burner, installed three gas burners and modified forced underfire air system; also has overfire air ports and dampers, and temperature recorder; efficiency of modifications unknown at present.
Rite-Way Asphalt Company (Butte)		Operate wet scrubber preceded by cyclone. Dust fairly well controlled; some black smoke emission from oil burner.
Gilman Excavating, Inc. (Butte)		Have ceased operating leased asphalt plant on Centennial Avenue. Plan to purchase new plant for 1971 season.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
S I L V E R   B O W   C O U N T Y		
Silver Bow County Asphalt Plant (Butte)		Operate wet scrubber. Emissions probably not adequately controlled.
Safeway (Mass. Ave.) (Butte)		Installed secondary gas burner with the automatic burner controls on multiple-chamber incinerator; approved.
Safeway (Front St.) (Butte)		Installed secondary gas burner, automatic burner controls, and induced-draft stacks fan on existing multiple-chamber incinerator; approved.
Safeway (E. Granite St.) (Butte)	X	Operate unapproved single-chamber incinerator, usually has smoke emissions.
Buttrey Foods (Butte)		Installed approved multiple-chamber incinerator with secondary gas burner, automatic burner controls, and barometric damper.
Albertson's (Butte)		Installed secondary gas burner, automatic burner controls on existing multiple-chamber incinerator; approved.
St. James Community Hospital (Butte)		Operate multiple-chamber incinerator, one primary gas burner, for paper only.
Silver Bow General Hospital (Butte)		Operate unapproved single-chamber incinerator, one gas burner, for paper and some pathological waste.
Garbage and Trash (Butte)		Landfill-type, no burning.
Open Burning (Butte)	X	Being brought under control.
Dust Control (Butte)		City streets - 70% of unpaved streets sprayed with asphalt emulsion and covered with rock chips; city plans to treat remainder in 1971. County streets - 90% of unpaved streets sprayed with asphalt emulsion and covered with rock chips; county plans to treat remainder in 1971.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
YELLOWSTONE COUNTY		
Great Western Sugar Company (Billings)		Converted coal fired boilers to natural gas in September, 1969, thereby virtually eliminating particulate and sulfur emissions from the power boilers. Emissions control equipment will be installed on pulp dryers if established by limits. Improvement in odor control should result from the improved waste water treatment system now on a timetable for construction.
Farmers Union (Billings)		Installed sulfur recovery unit in May, 1969. Recovers 22 tons per day of sulfur. Reduced total sulfur oxides emissions with this facility by 67%. Meets sulfur emission requirements by blending high sulfur fuel with low sulfur plant gas. Particulate emissions of 1.05 tons per day are within requirements. Allowable 2.5 tons per day. One gasoline storage tank remains to be converted to a floating roof design. The uncovered oil-water separator is a source of hydro-carbon emission and odor. This must be controlled prior to June, 1972, the effective date of the "Petroleum Products" regulation. The construction of a smokeless flare was completed in December of 1970. A "Variance" was granted to allow operations during this interim period. All open burning has been stopped and a pickup service has been contracted to dispose of refuse in a landfill.
Montana Power (Billings)		During 1969 a section was added to the economizer, and baffles were installed in the flue to make possible better dust collection in the electrostatic precipitator. The latest emission tests indicate compliance with particulate regulations. Power is generated in this plant (J.E. Corette Plant) by burning low sulfur coal. The Byrd Plant operates primarily on natural gas but if gas is not available some high-sulfur oil is burned. Low-sulfur oil or natural gas is fired simultaneously with this high-sulfur oil to meet the State "Sulfur in Fuel" regulation. Full Load Dust Emission -- 426#/hr. Allowable Dust Emission -- 437#/hr. Sulfur Emission is 15 tons/day. Allowable Sulfur Emission is 30 tons/day.

InstallationViolationAction and Status

## YELLOWSTONE COUNTY

Continental Oil Company  
(Billings)

Sulfur is removed and recovered from gas stream through contract with Montana Sulfur and Chemical. Present sulfur emission is 13 tons per day. Meets requirements by blending high sulfur clarified oil from FCC unit with low sulfur plant gas. Major modifications were made to the FCC unit in 1967 which reduced particulate emissions by about 400 pounds per day and sulfur by 10 tons per day. Present particulate emission about 1425#/day; allowable = 1850#/day. The upgrading of the present oil-water separator and the installation of a floating roof on one gasoline storage tank remain to meet compliance with the "Petroleum Products" regulation (effective date, June, 1972). The present smokeless flare was installed in May of 1970. Dispose of refuse in landfill.

Humble Oil Company  
(Billings)

X

Sulfur is removed and recovered from plant gas streams through contract with Montana Sulfur and Chemical. "Sulfur in Fuel" requirements are met by blending high sulfur bottoms with desulfurized plant gas in the boiler and process heaters. A smokeless flare installed in summer of 1970, replaced inadequate ground flare. Modifications made in 1969 to the fluid catalytic cracking unit resulted in much reduced particulate emissions. A carbon monoxide boiler is scheduled for completion early in 1971 which will control emissions of black smoke and carbon monoxide from the coker. Project underway to control dust from product coke handling. Proposed pond aeration will improve odor control. To meet "Petroleum Products" regulation, oil-water separator will require modification.

Montana Sulfur and Chemical  
(Billings)

Duplicate facilities were recently completed which will serve to prevent the escape of sulfur gases during downtime (turnaround) of the regular facilities. The increase in total sulfur processed by Montana Sulfur from two adjacent refineries has not resulted in increased emission rates because of the installation of a liquid H<sub>2</sub>S process in 1967 which consumes a portion of the sulfur gas input and yields no emission. H<sub>2</sub>S emission rate status undefined.

InstallationViolationAction and Status

## YELLOWSTONE COUNTY

Empire Sand and Gravel Co., (Asphalt Plant) Inc. (Billings)	X	Installed gas scrubber. Requested to clean up peripheral dust sources. Have use permit for asphalt plant, gravel crushing, and processing plant.
Midland Materials (Asphalt Plant) (Billings)		Have gas scrubber. Source tested 7/23/70. Found in compliance. Has use permit for asphalt batch plant.
Barry O'Leary Inc. (Asphalt Plant) (Billings)		Installed Barber-Greene orifice wet-type collector. Construction completed 5/20/70. Has permit for asphalt batch plant and for portable crusher.
Grand Avenue Auto Wrecking (Billings)		Not burning.
Carl Weissman and Sons (Billings)		Not burning.
Pacific Hide and Fur (Billings)		Wire burning in approved multiple-chambered incinerator (Petro-Chem Iso-Flow Furnace). 6.2 million BTU minimum capacity. Has use permit.
Mountain Bell (Billings)		Have tuned and modified auxiliary power plant to meet emission standards.
R. W. Sears Oil and Refining (Billings)		Has permits for dehydration unit and for distillation recovery system for non-condensibles.
Midland Empire Packing Co. (Billings)	X	Source tested rotary driers in May, 1970. Found to be 500% over process loss regulations. Have no use permits for direct fired rotary drier or continuous rendering system. Board granted a variance until June 30, 1971, to perform modifications to existing plant. Plans for modification are to be submitted by December 1, 1970. No variance was granted on any future plant.
Pierce Packing Company (Billings)		Has submitted a compliance program which was approved by the Board. Sausage smokehouse was controlled as of Oct. 15, 1970 by switching to use of liquid smoke. Noncondensable gases from rendering cookers will be controlled by Dec. 31, 1970, using acceptable afterburners or fed directly to boiler air intake. Rendering (open retorts and handling) given variance until June 30, 1971 to complete a study of control processes.

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
YELLOWSTONE COUNTY		
Billings Rendering Company (Billings)		Given a variance until June 30, 1971, to control odorous emissions. Variance subject to cancellation after six months (December 30, 1970) if no activity has been shown toward a solution of the odor problems.
Farr Better Feeds (Billings)		Was under variance until November 15, 1970, to control rail car unloading area, storage tank vents, and the hammer mill system. Have complied.
Farmers Union G.T.A. Feed (Billings)		Given variance until December 31, 1970 to control hammer mill system. Have complied.
Peavey Company Flour Mills (Billings)		Under variances. Truck dump to be rebuilt and controlled by June 30, 1971. Elevator and feed loading areas to be controlled by December 31, 1970.
Trinidad Bean and Elevator Co. X (Billings)		Has requested a variance until June 30, 1971, to control bean cleaners. No action by Board at this date.
Albertson's Food Center (Billings)		Multiple-chamber approved incinerator. 450 lbs/hr. Secondary burner: 750,000 BTU. Pacific Kerner Incinotrol Model 445-A.
Buttrey's Super Store (Billings)		Pacific Kerner Model S-451, Multiple-chamber approved incinerator. 450 lbs/hr. Secondary burner: 750,000 BTU.
Buttrey's Family Center (Billings)		J. Goder Model 1220, Multiple-chamber approved incinerator. 480 lbs/hr. Secondary Burner: 500,000 BTU.
Gibson's Discount Center (Billings)		Fire Engineers #720, Multiple-chamber approved incinerator. 800 lbs/hr. Primary Burner: 750,000 BTU. Secondary Burner: 600,000 BTU.
Golden Rule Store (Billings)		Incinotrol Model 445-A. Multiple-chamber incinerator, approved. Primary Burner: 500,000 BTU. Secondary Burner: 500,000 BTU.
Kon's Sooper Market (Billings)		J. Goder Model 1160. Multiple-chamber approved incinerator. 325 lbs/hr. Secondary Burner: 500,000 BTU.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Y E L L O W S T O N E   C O U N T Y		
K-Mart (Billings)		Federal Model FE-5, Multiple-chamber approved incinerator. 350 lbs/hr. Secondary Burner: 750,000 BTU Primary Burner: 750,000 BTU Violations resulted in shutdown of unit in June, 1970. Alterations have since allowed the incinerator to operate.
Kon's Custer Market (Billings)		J. Goder Model 1100, Multiple-chamber approved incinerator. 200 lbs/hr. Secondary Burner: 500,000 BTU
Oscro Drug (Billings)		Goder, Multiple-chamber approved incinerator. Secondary Burner: 750,000 BTU Barometric Damper.
Sears Roebuck and Co. (Billings)		Goder, Multiple-chamber approved incinerator. Secondary Burner: 750,000 BTU. Barometric damper.
Skaggs Drug Center (Billings)		Pacific Kerner, Multiple-chamber approved incinerator. Secondary Burner: 750,000 BTU. Guillotine damper.
Snappy's Food Market (Billings)		D.F.C. Incinerator, Multiple-chambered approved incinerator. 250 lbs/hr. Secondary Burner: 750,000 BTU. Barometric damper. This store is not presently operating but incinerator is still on premises.
Morrison Building (Billings)		Warm Morning Domestic Incinerator, status unknown.
Montana-Dakota Utilities (Billings)		Volcanor Model F-7, Multiple-chamber approved incinerator. 75 lbs/hr. Secondary Burner: 500,000 BTU
Montana Brake Engineering (Billings)		Brake shoe incinerator equipped with afterburner. Operates within visible emission standards.
Northland Steel (Billings)		Status unknown.
Security Bank (Billings)		Goder, Multiple-chamber incinerator. Primary Burner: 200,000 BTU Secondary Burner: 750,000 BTU Barometric damper.



<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Y E L L O W S T O N E   C O U N T Y		
Billings Clinic (Billings)		J. Goder Model 7-PUD with H500-32 Secondary gas burner, Multiple-chambered approved incinerator. 100 lbs/hr. Secondary Burner: 500,000 BTU Barometric damper.
Deaconess Hospital (Billings)		Given one year variance to complete a new wing and incineration system. Present incinerator can burn contaminated waste from 12 noon to 3 p.m. daily.
Moore Lane Veterinary Hospital (Billings)		Shenandoah Model IDBG-66, Multiple-chamber approved incinerator. 250 lbs/hr. Primary burner: 750,000 BTU. Secondary Burner: 750,000 BTU
Shiloh Road Veterinary Hospital (Billings)		Status Undefined.
St. Vincent's Hospital (Billings)		J. Goder Model 1010 Multiple-chambered approved incinerator. 200 lbs/hr. Secondary Burner: 2 burners @ 750,000 BTU each. Barometric damper and guillotine damper with I. D. fan.
Yellowstone County Nursing Home (Billings)		Calcinator MH-4 incinerator, design unknown, compliance unknown. 20 lbs/hr.
Yellowstone County Courthouse (Billings)		Two incinerators. J. Goder Model B-150 450 cu. ft./hr. (paper only). J. Goder Model H-500-2M 450 cu. ft./hr. (paper only) design and compliance unknown.
School District #2 (Billings)		All schools now use refuse cans.
Feed Lots (Billings)		Under Section IX of the Air Pollution Control regulations (Permits), the power does exist to deny an organization the right to construct a possible source of air pollution if controls are not installed or used. The only available air pollution control technique is separation of feed lots and residences. Odor complaints.
Railroads (Billings)		Burlington-Northern agreed on September 22, 1970, to tune all diesel locomotives in the Billings area. One unit emitting excessive smoke was sent to the shop at Livingston for reconditioning of the diesel engine.

InstallationViolationAction and Status

## Y E L L O W S T O N E   C O U N T Y

Open Burning (Billings)	X	All open burning is and has been strongly resisted. An effort is made to restrict burning to ditch banks, fence rows, and fire hazards. Burning is allowed only during times of favorable meteorological circumstances with provision to terminate the burning completely if the meteorological conditions turn unfavorable during the burn period.
Burlington-Northern Railroad Yard (Laurel)		They are presently hauling their waste to the Laurel dump.
Union Tank Car Company (Laurel)		Settling pond is still being used. However, they have not burned for two years. They are contemplating an incineration facility.
School District #7 (Laurel)		Paper waste is picked up every day by the city and hauled to the dump.
Thriftway Food Market (Laurel)		Have never had an incinerator. Waste is hauled to dump.
Safeway Store (Laurel)		Incinerator shut down as of June 1, 1970, waste hauled to dump.
Garbage and Trash (Laurel)	X	This dump has been burning sporadically since the beginning of local air pollution control. Dump is a city-county project. Expect to completely eliminate all open burning by June 30, 1971.

## SOURCES IN COUNTIES NOT PREVIOUSLY INCLUDED

<u>Installation</u>	<u>Violation</u>	<u>Action and Status</u>
Holly Sugar (Hardin)		Alleged odor from beet and pulp processing and particulate from pulp drier and coke fired lime kiln. Coal burned in boiler for process steam. An emission analysis will be made of this plant during 1971.
Holly Sugar (Sidney)		Alleged odor from beet and pulp processing and particulate from pulp drier and coke fired lime kiln. Natural gas fired boiler for process steam. An emission analysis will be made of this plant during 1971.
Montana-Dakota Utilities (Sidney)		Power plant burns low sulfur coal and controls particulate emission with a multi-clone mechanical collector. Compliance with particulate regulation doubtful. Tests will be conducted early in 1971 to determine if additional control equipment is required.
Montana-Dakota Utilities (Glendive)		This power plant uses natural gas as a fuel. Particulate and sulfur emissions are negligible.
Canadian Hydrocarbons (Cut Bank)		Doubtful compliance with "Sulfur in Fuel" regulation and forthcoming "Petroleum Storage" regulation pertaining to hydrocarbon emissions.
Big West Oil Company (Kevin)		Doubtful compliance with "Sulfur in Fuel" regulation and forthcoming "Petroleum Storage" regulation pertaining to hydrocarbon emissions.
Tesaro Petroleum Company (Wolf Point)		Sweet crude processed. May comply with "Sulfur in Fuel" regulation. Doubtful compliance with forthcoming "Petroleum Storage" regulation pertaining to hydrocarbon emission.







